



REPORT OF THE
**Hydro-Electric Power
Commission**
OF ONTARIO
1922

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MR. WILLS MACLACHLAN


Wills Macleachlan



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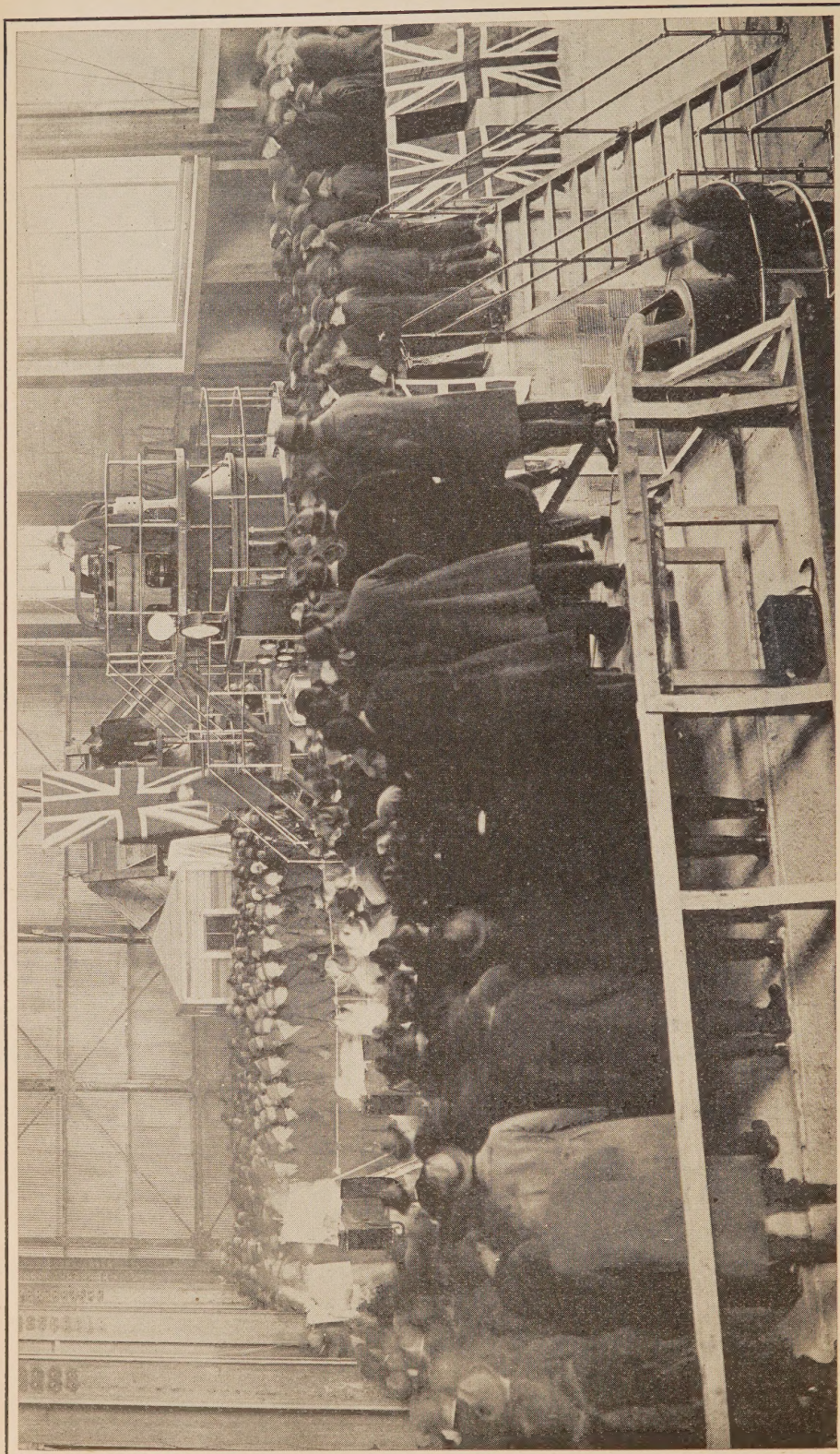
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QUEENSTON-CHIPPAWA POWER DEVELOPMENT
Queenston power house. Opening ceremony, December 28, 1921

*Ontario Hydro-Electric Power
Commission*
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(Fifteenth) Annual Report

OF THE

HYDRO-ELECTRIC POWER COMMISSION

OF THE

PROVINCE OF ONTARIO

FOR THE YEAR ENDED OCTOBER 31st

1922

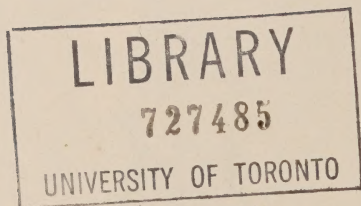
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1923

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To His Honour THE HONOURABLE HARRY COCKSHUTT,
Lieutenant-Governor of Ontario

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to present to your Honour the Fifteenth Annual Report of the Hydro-Electric Power Commission of Ontario for the fiscal year ending October 31st, 1922.

This Report covers all of the Commission's activities and also embodies those of the municipal Electric Utilities operating in conjunction with the various systems to supply electric service to the people of the Province. The financial statements, the statistical data, and the general information herein submitted have been so arranged and presented as to give the reader a ready and intelligent grasp of every important feature of the Commission's operations.

The Report deals with the various operations of the Commission for the past year with respect to 13 systems to which are connected 239 municipalities, 65 townships and rural districts and 51 industrial companies. The Report also shows the cumulative results for the various periods during which operation has been maintained.

No one taking a broad outlook on world conditions can fail to be impressed with the difficulties which still beset general commercial and industrial advancement. European markets, especially, have been unable to resume their normal importations, and this has had its effect upon Canadian manufactured and agricultural products. There have been circumstances in the great Republic to the south which, of late, have been unfavourable with respect to our exports to this important market. Obviously, such circumstances have contributed to a curtailment in the growth of the demand for electrical energy for power purposes. No review of the last year's operations of an organization such as the Hydro-Electric Power Commission can properly be appraised without taking cognizance of the important factors referred to. It is a gratification to know, however, that, notwithstanding all such adverse factors, the Commission's operations during the past year have been the most successful in its history.

It is most gratifying to the Commission to be able to report that the increase in revenue in the municipalities in the Niagara district was sufficient to carry the Queenston-Chippawa development without the necessity, with but very few exceptions, of having to increase the rates *to consumers*.

In reviewing the results of the year's work there are two aspects of the Commission's operations which should clearly be distinguished, namely, the relationship of the Commission to the municipalities and the relationship of the municipalities to their customers. This statement deals particularly with the operations of the Commission with the municipalities, with respect to which the total revenue for the year was \$7,893,979.41, while the cost of service, made up of the cost of power, operation, maintenance, administration and interest, was \$7,102,737.09, and the necessary sinking fund and reserves for renewals and contingencies amounted to \$947,062.06, making a total of \$8,049,799.15. As is its custom, the Commission at the beginning of the year determined a schedule of rates to cover the estimated cost of service to all municipalities. After meeting all obligations in accordance with Section 23 of the Power Com-

mission Act, the expenditures and reserves exceeded the revenue by \$155,819.74, or 1.97 per cent. This amount was billed to the municipalities and taken up in their operation and balance sheets, so that the Commission's balance sheet with the municipalities shows neither profit nor loss.

A summary of the financial operations of the Commission with the municipalities comprising the various systems is presented under the respective systems as follows:

NIAGARA SYSTEM

While the actual cost of development, transmission and administration exceeded the estimates on which the interim rates were based, by \$307,257.73, this deficit has been billed to the municipalities and absorbed in their operating costs. After absorbing this deficit, the municipal accounts show a gross surplus from the year's operation of \$1,006,444.62 and a net surplus of \$406,330.40, after providing for \$600,114.22 depreciation.

On the Niagara system there were only thirteen municipalities that showed an actual deficit during the year, totalling \$21,416.07 out of a total gross revenue of \$10,407,875.83.

During the year, several serious accidents occurred in the Ontario Power Company's generating station and in the Queenston-Chippawa generating station. These circumstances necessitated some of the generators being laid up for repairs for an extended period, and this, in turn, necessitated the purchase of a considerable quantity of electrical power to supply the requirements of the Niagara system,—a fact which materially increased the cost of power supplied to the municipalities in this system.

During the past year there has been a gradual increase, both in the number of customers supplied on the Niagara system and also in the loads supplied to the various municipalities.

SEVERN SYSTEM

The Severn system is supplied from the Big Chute development on the Severn river, with arrangements for auxiliary supply from the Eugenia system, the Wasdells system and the Orillia plant at Ragged rapids. This system supplied seventeen municipalities and one rural power district, located south of Georgian bay and west of lake Simcoe.

The municipal records show a net surplus from the year's operation of \$46,996.62 after providing for the full amount of the depreciation. One small village showed a deficit of \$107.25; all the other municipalities have a credit balance on the system's operation.

EUGENIA SYSTEM

The Eugenia system is supplied with power from a generating plant located at Eugenia falls on the Beaver river, about twelve miles south of Georgian bay, and serves twenty-three municipalities and two rural power districts in the surrounding district.

The actual cost of development and operation was \$22,915.02 less than the estimates on which the interim rates were based, and the municipalities operated with a net surplus for the year of \$40,098.58, after providing for the full amount of the depreciation.

The increase in the power requirements of the municipalities on this system has made it necessary for the Commission to investigate the installation of a second pipe line in order to increase the capacity of the generating plant.

WASDELLS SYSTEM

The Wasdells system, with a generating plant located at Wasdells falls, on the Severn river, supplies eight villages and two industrial loads located west of lake Simcoe; two villages being added to the system during the past year.

The actual cost of power during the year was \$5,288.53 less than the estimates on which the interim rates were based, and the municipalities operated with a net surplus of \$11,049.36 after providing for the full amount of the depreciation.

The only municipal deficit was in one village which had operated for only two months and the loss was something less than \$100.00.

MUSKOKA SYSTEM

The Muskoka system is supplied from a development at High falls, on the Muskoka river, and serves the municipalities of Huntsville and Gravenhurst.

These municipalities absorbed the actual cost of power and operated with a net surplus during the year of \$2,627.95 after providing for the full amount of the depreciation.

ST. LAWRENCE SYSTEM

The St. Lawrence system serves the district immediately to the north of the St. Lawrence river, between Brockville and Cornwall; the supply of power for the system being purchased from the Cedar Rapids Transmission Company; the power being delivered at a point near Cornwall.

The increased load on the system has made it necessary, during the year, to construct additional lines and make other necessary changes, so that power is now transmitted over the system at 44,000 volts instead of 22,000 volts, as formerly.

The municipalities forming this system operated during the year with a net surplus of \$23,739.92 after providing for the full amount of the depreciation.

RIDEAU SYSTEM

The Rideau system serves the district in the vicinity of Smiths Falls, Perth and Carleton Place; power being supplied for the system from a Hydro-electric development at High Falls, on the Mississippi river, from the Carleton Place generating plant, and, also, with power purchased from the Rideau Power Company.

All of the municipalities on this system operated at a profit; the total for the year amounting to \$25,592.07 after providing for the full amount of the depreciation.

THUNDER BAY SYSTEM

The Thunder Bay system is located north of lake Superior and is supplied with power from a power development constructed by the Commission on the Nipigon river, approximately sixty miles from the city of Port Arthur.

Owing to circumstances over which the Commission had no control, some of the loads it was expected to supply from this plant during the year did not materialize, and, in consequence, the amount at which the municipality of Port Arthur was billed for power during the year was not sufficient to meet all of the charges on the development. The Nipigon plant, it will be recalled, was

installed with sufficient capacity to supply the power requirements of large pulp and paper undertakings which all evidences indicated would, in the near future, be established in this district.

In 1922, negotiations with a large pulp and paper company had reached the stage where a contract for a large block of power will, probably, be signed early in the coming year. With this large additional load on the system, it will, in a few years, be on a self-supporting basis without the necessity of increasing the rate at which the municipality of Port Arthur is now being billed for power.

During the year, the municipality of Port Arthur has been billed for the load taken at a rate of \$25.00 per horsepower and the cost of operation in excess of this rate is being carried forward as a charge against the future operation of this system.

CENTRAL ONTARIO SYSTEM

This system was purchased by the Government of the Province from the former owners, the Electric Power Co., Ltd., on March 1, 1916. Since June 1, 1916, it has been operated continuously by the Hydro-Electric Power Commission of Ontario, as trustees for the Province, and serves the district lying between Whitby and Kingston.

An additional power development was constructed at Ranney falls on the Trent river, to supply the growing demand for power. This plant was placed in operation in August, 1922, and adds 10,000 horsepower to the capacity of the system.

The financial results of the operations for the past year were satisfactory. The revenue was sufficient to meet all costs of operation, all interest charges and to provide the full required increments of reserves for renewals, contingencies, and sinking fund on that portion of the investment for which sinking fund provision is required. Total accumulated reserves now amount to \$1,217,980.25.

Gratifying improvement has been made in the financial position of local utilities such as gas plants, waterworks system and street railway.

Those interested in the work of the Hydro-Electric Power Commission will find its various operations fully set forth in the extensive tables which comprise this Report. A review of the various data will disclose many interesting features. Thus, by way of illustration, the automatic reduction in the debenture debt, due to the annual principal or sinking fund payments being provided for out of revenue, and the remarkable accumulation of assets, reflect the satisfactory financial condition of the Hydro utilities generally. The tabular statement on page 295 shows in condensed form the relation of assets to liabilities in fifty municipalities. In the first eighteen municipalities the quick assets such as cash, bonds, accounts receivable and inventories exceed in value the total liabilities, including the debenture balance, and they may be considered as being out of debt. In the remaining thirty-two municipalities the excess of liabilities over the quick assets is relatively so small that a number of them will be transferred to the "out-of-debt" list when the books are closed at the end of 1923.

Respectfully submitted,

ADAM BECK,

Chairman

TORONTO, ONTARIO, March 30th, 1923.

COLONEL SIR ADAM BECK, KT., LL.D.,
Chairman, Hydro-Electric Power Commission of Ontario,
Toronto, Ontario.

SIR,—I have the honour to transmit herewith the Fifteenth Annual Report of the Hydro-Electric Power Commission of Ontario for the fiscal year ended October 31st, 1922.

I have the honour to be,

Sir,

Your obedient servant,

W. W. POPE,
Secretary

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

COLONEL SIR ADAM BECK, Kt., LL.D., *Chairman*

LT.-COL. HON. D. CARMICHAEL, D.S.O., M.C.

FRED R. MILLER, Esq.

W. W. POPE, *Secretary*

F. A. GABY, *Chief Engineer*

CONTENTS

SECTION	PAGE
I. LEGAL PROCEEDINGS - - - - -	1
ACTS (SEE ALSO APPENDIX I) - - - - -	1
RIGHT-OF-WAY AND LANDS - - - - -	3
II. TRANSMISSION SYSTEMS (SEE ALSO APPENDIX II) - - - - -	6
NIAGARA SYSTEM - - - - -	6
EUGENIA SYSTEM, WASDELLS SYSTEM - - - - -	8
MUSKOKA SYSTEM, ST. LAWRENCE SYSTEM, RIDEAU SYSTEM, THUNDER BAY SYSTEM - - - - -	10
OTTAWA SYSTEM, CENTRAL ONTARIO AND TRENT SYSTEM, NIPISSING SYSTEM - - - - -	11
III. OPERATION OF THE SYSTEMS - - - - -	12
NIAGARA SYSTEM - - - - -	16
ONTARIO POWER COMPANY - - - - -	23
TORONTO POWER COMPANY - - - - -	27
COMBINED NORTHERN SYSTEMS - - - - -	28
SEVERN SYSTEM - - - - -	29
EUGENIA SYSTEM - - - - -	30
WASDELLS SYSTEM - - - - -	33
MUSKOKA SYSTEM - - - - -	35
ST. LAWRENCE SYSTEM - - - - -	37
RIDEAU SYSTEM - - - - -	38
THUNDER BAY SYSTEM - - - - -	41
OTTAWA SYSTEM - - - - -	43
CENTRAL ONTARIO AND TRENT SYSTEM (SEE ALSO APPENDIX III) - - - - -	43
NIPISSING SYSTEM - - - - -	48
OPERATING DEPARTMENT METER SECTION - - - - -	50
IV. ELECTRICAL ENGINEERING AND CONSTRUCTION - - - - -	51
NIAGARA SYSTEM - - - - -	51
QUEENSTON GENERATING STATION - - - - -	51
ONTARIO POWER COMPANY - - - - -	58
SEVERN SYSTEM - - - - -	74
EUGENIA SYSTEM - - - - -	76
WASDELLS SYSTEM - - - - -	78
MUSKOKA SYSTEM - - - - -	78
ST. LAWRENCE SYSTEM - - - - -	80
RIDEAU SYSTEM - - - - -	82
THUNDER BAY SYSTEM - - - - -	82
OTTAWA SYSTEM - - - - -	83
CENTRAL ONTARIO AND TRENT SYSTEM - - - - -	83
NIPISSING SYSTEM - - - - -	102
TRANSFORMING STATION DETAILS—TABLES OF - - - - -	103
V. HYDRAULIC ENGINEERING AND CONSTRUCTION - - - - -	116
NIAGARA SYSTEM - - - - -	116
SEVERN SYSTEM - - - - -	120
MUSKOKA SYSTEM - - - - -	121
ST. LAWRENCE SYSTEM - - - - -	121
THUNDER BAY SYSTEM - - - - -	121
CENTRAL ONTARIO AND TRENT SYSTEM - - - - -	122
NIPISSING SYSTEM - - - - -	124
MISCELLANEOUS - - - - -	124

SECTION	PAGE
VI. MUNICIPAL WORK - - - - -	126
NIAGARA SYSTEM - - - - -	126
NIAGARA SYSTEM—RURAL - - - - -	132
ESSEX COUNTY SYSTEM - - - - -	136
SEVERN SYSTEM - - - - -	137
EUGENIA SYSTEM - - - - -	139
WASDELLS SYSTEM - - - - -	141
MUSKOKA SYSTEM - - - - -	142
ST. LAWRENCE SYSTEM - - - - -	143
RIDEAU SYSTEM - - - - -	146
THUNDER BAY SYSTEM - - - - -	147
OTTAWA SYSTEM - - - - -	147
CENTRAL ONTARIO AND TRENT SYSTEM - - - - -	148
NIPISSING SYSTEM - - - - -	150
NEW ONTARIO DISTRICT - - - - -	150
VII. ELECTRIC RAILWAYS - - - - -	151
GENERAL DISCUSSION - - - - -	151
REPORTS MADE ON ELECTRIC RAILWAYS - - - - -	155
REPORT ON WORK DONE DURING YEAR - - - - -	161
OPERATING STATISTICS - - - - -	171
FINANCIAL STATEMENTS - - - - -	172
VIII. GENERAL ACTIVITIES OF THE COMMISSION - - - - -	176
ELECTRICAL INSPECTION - - - - -	176
LABORATORIES - - - - -	179
IX. FINANCIAL STATEMENTS - - - - -	189
EXPLANATORY STATEMENT RESPECTING THE ACCOUNTS - - - - -	189
GENERAL DETAILED STATEMENT OF ASSETS AND LIABILITIES - - - - -	194
NIAGARA SYSTEM - - - - -	200
SEVERN SYSTEM - - - - -	230
EUGENIA SYSTEM - - - - -	236
WASDELLS SYSTEM - - - - -	246
MUSKOKA SYSTEM - - - - -	252
ST. LAWRENCE SYSTEM - - - - -	258
RIDEAU SYSTEM - - - - -	262
THUNDER BAY SYSTEM - - - - -	266
CENTRAL ONTARIO AND TRENT AND NIPISSING SYSTEMS - - - - -	270
THOROLD SYSTEM - - - - -	280
ESSEX COUNTY SYSTEM - - - - -	282
ONTARIO POWER COMPANY - - - - -	284
PROVINCIAL TREASURER ACCOUNT - - - - -	290
X. MUNICIPAL ACCOUNTS - - - - -	292
EXPLANATORY STATEMENT - - - - -	292
CONSOLIDATED OPERATING REPORT - - - - -	296
CONSOLIDATED BALANCE SHEET - - - - -	298
STATEMENT A—COMPARATIVE BALANCE SHEETS - - - - -	300
COMBINED BALANCE SHEET OF HYDRO MUNICIPAL UTILITIES - - - - -	377
STATEMENT B—CONDENSED OPERATING REPORTS - - - - -	396
STATEMENT C—COMPARATIVE DETAILED OPERATING REPORTS - - - - -	408
STATEMENT D—COMPARATIVE REVENUE, CONSUMPTION, NUMBER OF CONSUMERS, AVERAGE MONTHLY BILL, NET COST PER KILOWATT-HOUR, ETC. - - - - -	470
STATEMENT E—RESPECTING STREET LIGHTS - - - - -	521
STATEMENT F—COST OF POWER AND POWER RATES - - - - -	532
STATEMENT G—LIGHTING RATES IN MUNICIPALITIES - - - - -	542
APPENDIX I. ACTS - - - - -	553
APPENDIX II. DESCRIPTION OF TRANSMISSION LINES - - - - -	585
APPENDIX III. FLOW REGULATION OF THE TRENT AND OTONABEE RIVERS - - - - -	648
INDEX - - - - -	671

ILLUSTRATIONS

	PAGE
QUEENSTON-CHIPPAWA DEVELOPMENT: QUEENSTON POWER HOUSE. OPENING CEREMONY, DECEMBER 28, 1921 - - - - -	Frontispiece
TRANSMISSION LINES:	
TOWERS ON QUEENSTON ESCARPMENT WALL FOR HIGH-VOLTAGE OUTGOING LINES FROM NOS. 1, 2 AND 3 UNITS IN QUEENSTON GENERATING STATION - - -	7
SKETCH ILLUSTRATING TENTATIVE SCHEME FOR USING THE ONE RIGHT-OF-WAY FOR PEDESTRIAN, VEHICULAR AND RAILWAY TRAFFIC AND FOR THE TRANSMISSION OF ELECTRICITY AT HIGH VOLTAGE - - - - -	7
SEMI-ANCHOR TOWER, 3-DEGREE ANGLE. QUEENSTON-BURLINGTON TRUNK LINE -	9
TREE WITHIN BASE OF TOWER - - - - -	9
QUEENSTON-BURLINGTON TRUNK LINE CROSSING THE NEW WELLAND SHIP CANAL	9
SWITCHING TOWER ON THE NIPIGON-PORT ARTHUR, 110,000-VOLT WOOD-POLE LINE	10
QUEENSTON-CHIPPAWA DEVELOPMENT:	
QUEENSTON POWER HOUSE. GENERAL VIEW FROM UNITED STATES SIDE OF NIAGARA RIVER, DECEMBER 20, 1921 - - - - -	52
QUEENSTON POWER HOUSE. GENERAL VIEW FROM UNITED STATES SIDE OF NIAGARA RIVER, NOVEMBER 1, 1922 - - - - -	53
SCREEN HOUSE FROM SOUTH-EAST, OCTOBER 8, 1921 - - - - -	54
ADMINISTRATION BUILDING AND SCREEN HOUSE FROM SOUTH-EAST, NOVEMBER 3, 1922 - - - - -	54
QUEENSTON POWER HOUSE: ERECTION OF NO. 2 GENERATOR. INSTALLING ROTOR	55
No. 1 TRANSFORMER BANK AND DELTA BUS - - - - -	55
110,000-VOLT BUS CONNECTIONS AND DISCONNECTING-SWITCHES - - -	56
OUTGOING LINES CONNECTED THROUGH REAR PENT HOUSES ON ROOF - - -	57
ONTARIO POWER COMPANY: ACCIDENT IN POWER HOUSE. SEGMENT OF ROTOR THROWN THROUGH ROOF - - - - -	59
BIRDS-EYE VIEW SHOWING DAMAGE DONE BY BURSTING OF GENERATOR - - -	59
HAMILTON TRANSFORMER STATION FROM NORTH-EAST - - - - -	75
SALTFLEET DISTRIBUTING STATION - - - - -	75
GREENBANK DISTRIBUTING STATION FROM EAST - - - - -	79
GREENBANK DISTRIBUTING STATION FROM WEST - - - - -	79
RANNEY FALLS DEVELOPMENT—CENTRAL ONTARIO AND TRENT SYSTEM:	
GENERATING STATION PROGRESS: SOUTH ELEVATION, JUNE 30, 1922 - - -	85
EAST ELEVATION, JUNE 30, 1922 - - - - -	85
POURING NO. 1 SUPPLY PIPE AND ERECTION OF GENERATOR-ROOM COLUMNS, DECEMBER 1, 1921 - - - - -	87
TRANSFORMER-WING MAIN-FLOOR REINFORCING, FEBRUARY 1, 1922 - - -	87
SUPERSTRUCTURE STEEL WORK, JANUARY 17, 1922 - - - - -	89
CONDUIT INSTALLATION ON CONTROL-ROOM FLOOR, FEBRUARY 21, 1922 - -	89
SETTING FIRST HALF OF NO. 2 GENERATOR STATOR, APRIL 4, 1922 - - -	93
NO. 1 GENERATOR SPIDER, WOUND FOR HEATING ELECTRICALLY, PRIOR TO SHRINKING ON SHAFT. JULY 1, 1922 - - - - -	93
GENERATING STATION EQUIPMENT: CONTROL-ROOM SWITCHBOARD. JULY 1, 1922 -	95
GENERATORS FROM SOUTH END OF ROOM. JUNE 30, 1922 - - - - -	95
LOW-VOLTAGE DISCONNECTING-SWITCHES. JUNE 30, 1922 - - - - -	96
HIGH-VOLTAGE LIGHTNING ARRESTER EQUIPMENT. JUNE 30, 1922 - - -	96
BANK OF TWO 4,500-KV-A., 3-PHASE TRANSFORMERS. JULY 1, 1922 - - -	97
HIGH-VOLTAGE LIGHTNING-ARRESTER EQUIPMENT. JUNE 30, 1922 - - -	97
LOW-VOLTAGE DISCONNECTING-SWITCHES AND STRUCTURES. JUNE 30, 1922 -	99
LOW-VOLTAGE BUS STRUCTURE. JULY 1, 1922 - - - - -	100
QUEENSTON-CHIPPAWA DEVELOPMENT—HYDRAULIC FEATURES: CONTROL GATE NEAR MONTROSE. MEN CLEARING THE CANAL. DECEMBER 22, 1921 - - -	
INTAKE ON THE NIAGARA RIVER AT CHIPPAWA. DIFFUSER OPENINGS NOS. 5 TO 1	119
INTAKE IN THE NIAGARA RIVER AT CHIPPAWA. LOOKING OUT THROUGH NO. 4 INNER DIFFUSER - - - - -	119

	PAGE
NIPIGON DEVELOPMENT: POWER HOUSE AND DAM FROM NORTH-WEST. NOVEMBER 1, 1921	123
NIPIGON DEVELOPMENT: POWER HOUSE AND MAIN DAM FROM EAST. OCTOBER 29, 1921	123
METER AND STANDARDS LABORATORY: TRIPLE REVERSING SWITCH FOR WATTMETER TESTING, AND OIL BATH FOR STANDARD RESISTANCES	183
STRUCTURAL MATERIALS LABORATORY: TORSION TEST ON LARGE POST-TYPE INSULATOR	185
APPARATUS USED FOR WEAR TESTS OF CONCRETE FLOOR PREPARATIONS	187
SELF-ALIGNING GRIPS FOR TESTING METALS IN TENSION	187
GURLEY GRAPHIC WATER STAGE REGISTER	651
RICE LAKE GAUGES	653

DIAGRAMS

QUEENSTON GENERATING STATION—PEAK LOADS, 1922	13
NIAGARA SYSTEM—DIAGRAM OF STATIONS. INSERT FACING	16
NIAGARA SYSTEM—PEAK LOADS, 1910 TO 1922	18
NIAGARA SYSTEM—MONTHLY KILOWATT HOURS TAKEN BY THE, 1918 TO 1922	20
ONTARIO POWER COMPANY—PEAK LOADS, 1917 TO 1922	24
ONTARIO POWER COMPANY—TOTAL MONTHLY OUTPUT OF GENERATING STATION, 1917 TO 1922	25
TORONTO POWER COMPANY—PEAK LOADS, 1920-1921-1922	27
SEVERN, EUGENIA, WASDELLS AND MUSKOKA SYSTEMS—DIAGRAM OF STATIONS. INSERT FACING	28
SEVERN, EUGENIA AND WASDELLS SYSTEMS—PEAK LOADS, 1920-1921-1922	32
MUSKOKA SYSTEM—PEAK LOADS, 1920-1921-1922	35
ST. LAWRENCE AND RIDEAU SYSTEMS—DIAGRAM OF STATIONS	36
ST. LAWRENCE SYSTEM—PEAK LOADS, 1920-1921-1922	37
RIDEAU SYSTEM—PEAK LOADS, 1920-1921-1922	39
THUNDER BAY SYSTEM—PEAK LOADS, 1916 TO 1922	40
THUNDER BAY SYSTEM—DIAGRAM OF STATIONS	41
OTTAWA SYSTEM—PEAK LOADS, 1917 TO 1922	42
CENTRAL ONTARIO AND TRENT SYSTEM—DIAGRAM OF STATIONS	44
CENTRAL ONTARIO AND TRENT SYSTEM—PEAK LOADS, 1916 TO 1922	46
NIPISSING SYSTEM—DIAGRAM OF STATIONS	48
NIPISSING SYSTEM—PEAK LOADS, 1920-1921-1922	49
CENTRAL ONTARIO AND TRENT SYSTEM—RANNEY FALLS DEVELOPMENT. PLAN OF GENERATING STATION	90
CENTRAL ONTARIO AND TRENT SYSTEM—RANNEY FALLS DEVELOPMENT. DIAGRAM OF CONNECTIONS	91
ESSEX DISTRICT RAILWAYS—OPERATING STATISTICS	166

IN APPENDIX III

PLATE A—POWER DEVELOPMENTS ON TRENT AND OTONABEE RIVERS	648
PLATE D—RICE LAKE ELEVATIONS, GRAPHIC RECORDS OF	655
PLATE E—DIAGRAMS OF LAKE AND RIVER ELEVATIONS, STREAM FLOW AND LOADS	659
PLATE G—ELEVATIONS AND FLOW—HEELY-HASTINGS REACH AND RICE LAKE	661
PLATE F—FLOW REGULATION AT HEELY FALLS	663
PLATE H—LOAD REDUCTIONS, JULY, 1922	666
PLATE I—ANALYSIS OF OPERATION	667

MAP

TRANSMISSION LINES AND STATIONS OF THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO	At End of Volume
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FIFTEENTH ANNUAL REPORT
OF THE
Hydro-Electric Power Commission
of Ontario

SECTION I

LEGAL PROCEEDINGS

HIS MAJESTY, by and with the consent of the Legislative Assembly of the Province of Ontario, in 1922, passed eight special Acts relating to the work of the Hydro-Electric Power Commission of Ontario. These Acts are reproduced in full as an appendix to this report. The short titles to the said Acts are as follows:

The Power Commission Act, 1922, Chapter 31.

The Rural Hydro-Electric Distribution Act, 1922, Chapter 32.

An Act respecting the filing of Claims against certain Companies or their Properties, Chapter 33.

The County of York Radial Railway Act, 1922, Chapter 34.

The Toronto Suburban Railway Company Act, 1922, Chapter 35.

The Municipal Electric Railway Act, 1922, Chapter 69.

An Act respecting the City of Niagara Falls, Chapter 120.

An Act respecting the Sandwich, Windsor and Amherstburg Railway, Chapter 144.

The agreements between the Hydro-Electric Power Commission of Ontario and the Municipalities and Corporations mentioned in the list hereunder given were approved by Order-in-Council dated the 28th day of April, 1922. These agreements are as follows:

With the Town of Orillia, 9th December, 1919.

With the Town of Thorold, 20th December, 1920.

With the Town of Uxbridge, 3rd March, 1920.

With the Town of Merritton, 25th November, 1920.

With the Town of Alexandria, 26th January, 1920.

With the Town of Kincardine, 30th June, 1920.

With the Town of Wingham, 20th February, 1920.

With the Village of Newbury, 1st November, 1920.

With the Village of Wroxeter, 21st January, 1921.

With the Village of Port Perry, 4th May, 1920.

With the Village of Lucknow, 5th March, 1920.

With the Village of Norwood, 17th March, 1920.

With the Village of Lakefield, 14th February, 1920.

With the Village of Teeswater, 2nd March, 1920.

- With the Village of Lancaster, 10th February, 1920.
With the Village of Lanark, 10th January, 1921.
With the Village of Maxville, 26th January, 1920.
With the Police Village of Martintown, 23rd April, 1920.
With the Police Village of Apple Hill, 25th May, 1920.
With the Police Village of Kirkfield, 24th February, 1920.
With the Police Village of Priceville, 8th March, 1920.
With the Township of Winchester, 6th November, 1920.
With the Township of Elizabethtown, 6th December, 1920.
With the Ontario Rock Company, Limited, 30th January, 1920.
With His Majesty The King represented by the Minister of Militia and Defence, 1st December, 1920.
With the Arthur Pequegnat Clock Company of Kitchener, — October, 1920.
With the G. W. MacFarlane Engineering Ltd., 2nd October, 1920.
With the Nipigon Fibre and Paper Mills Limited, 1st October, 1920.
With the Brunner Mond Canada Limited, 9th September, 1920.
With the Village of Wardsville, 14th March, 1921.
With the Village of Port Dover, 22nd November, 1921.
With the Village of Queenston, 25th July, 1921.
With the Village of Thedford, 22nd September, 1921.
With the Village of Alvinston, 24th June, 1921.
With the Village of Kemptville, 21st December, 1920.
With the Township of Beverley, 15th December, 1921.
With the Township of Yarmouth, 8th November, 1921.
With the Township of Raleigh, 21st November, 1921.
With the Township of North Dorchester, 18th November, 1921.
With the Township of Westminster, 29th November, 1921.
With the Township of Charlottenburg, 3rd October, 1921.
With the Township of West Nissouri, 15th December, 1921.
With the Township of South Dorchester, 7th November, 1921.
With the Township of Brantford, 31st October, 1921.
With the Township of Nottawasaga, 20th October, 1921.
With the Township of Howard, 7th November, 1921.
With the Township of Thorold, 15th December, 1921.
With the Township of Orford, 26th November, 1921.
With the Township of Nepean, 25th August, 1921.
With the Township of Edwardsburg, 1st August, 1921.
With the Township of Augusta, 9th May, 1921.
With the Township of North Oxford, 5th December, 1921.
With the Township of Willoughby, 1st December, 1921.
With the Township of East Nissouri, 21st December, 1921.
With the Township of Crowland, 15th December, 1921.
With the Township of Norwich, 14th November, 1921.
With the Township of Artemesia, 29th October, 1921.
With the Township of Bertie, 10th November, 1921.
With the Township of Stamford, 14th November, 1921.
With the Township of Kinloss, 21st November, 1921.
With the Township of Chatham, 21st November, 1921.
With the Township of Sandwich East, 14th November, 1921.
With the County of Welland, 10th May, 1921.
With the Standard Steel Construction Company of Welland, 15th February, 1921.

With the Brantford Sand and Gravel Company, Ltd., 24th October, 1920.
With the Dominion Sugar Company Ltd. of Chatham, 29th December, 1921.
With the Ontario Power Company of Niagara Falls, 11th November, 1920.
With the Water & Light Commission of the Town of Campbellford, 9th July, 1921.
With the Water & Light Commission of the Town of Preston, 7th July, 1921.

RIGHT-OF-WAY AND LANDS

Rural Power Lines

The construction of rural power lines to supply electrical energy to farmers has been proceeded with quite actively during the past year, and while in general the municipalities in which the lines have been constructed have taken care of pole and tree trimming rights, yet there have been quite a number of cases in which the services of an agent of the Right-of-Way have been required to arrange necessary settlements.

The procedure followed by the department when the construction of rural or other lines, upon public highways, has been decided upon is to communicate with the authorities controlling the roads or highways upon which it is proposed to locate lines, viz.: provincial highways, county provincial roads, suburban roads, county roads, or ordinary municipal roads, and arrange for the consent and co-operation of these authorities in the location of these lines. This course has worked out very satisfactorily and has prevented any friction between the authorities controlling the different classes of roads and the Commission, and especially in the case of roads controlled by the provincial Department of Highways.

During the year a settlement has been arranged with that department as to the cost of moving poles on roads which have been taken over by that department since the construction of pole lines upon them.

Rural lines have been constructed or arrangements made for such construction in the following townships:

Augusta, Bertie, Blenheim, Brantford, Charlottenburg, Caradoc, Chatham, Clinton, Dover, East Flamboro', East Zorra, Edwardsburgh, Flos, Grantham, Harwich, Kingston, London, Louth, Maidstone, Markham, North Dumfries, Nottawasaga, Oro, Orford, Rochester, Saltfleet, Sandwich West, Sarnia, Scarboro', Stamford, Stephen, Sunnidale, Thorold, Toronto, West Oxford, Willoughby, Vaughan.

Toronto and Niagara Power Company

The work of investigating the titles of the various properties owned by this and associated companies which came over in the "Clean Up" deal, and of transferring the same, was completed during the year.

In this connection a number of properties necessary for terminal facilities in connection with the Metropolitan railway at North Toronto were acquired for the Toronto and York Radial railway.

Wasdells Falls

All the claims, some thirteen in number, for flooding lands in connection with this development, were settled during the year to the satisfaction of claimants.

Queenston—Hamilton High-Tension Line

Nearly all of the outstanding right-of-way requirements for this line were secured during the year. It was found necessary to purchase a number of properties in this connection in the town of Grimsby and in the outskirts of St. Catharines where subdivisions had been made. Arrangements also had to be made to move a number of buildings from the right-of-way.

The construction of this line further rendered it necessary to settle a large number of claims for damages, especially in the fruit growing districts.

An additional parcel of land was also secured for the extension of the Hamilton station site.

Negotiations have also been carried on with the City Council of Hamilton and with the Parks and Harbour Boards of that city for the right to cross Burlington bay with this line in order to connect with a previously constructed line in the township of East Flamboro'.

Low-Tension Lines

In addition to the rural-power and high-tension lines referred to, considerable work has been carried on in connection with low-tension work for the purpose of supplying power to a number of the smaller urban municipalities.

The principal lines on which work was carried on in this connection were:

1. In the town of Trenton
2. In the town of Bowmanville
3. At Binkley's Corners
4. Teeswater to Kinloss
5. Balderson to Lanark
6. Morrisburg to Prescott
7. Brockville to Eugene Phillips' Plant
8. Preston to Kitchener
9. York Station to Islington
10. Grimsby to Beamsville
11. Dundas to Copetown
12. Seaforth to Clinton
13. Newbury to Glencoe
14. Newbury to Wardsville
15. Bothwell to Newbury
16. Forest to Thedford
17. Watford to Alvinston
18. Petrolia to Waterworks
19. Fletcher to Merlin
20. Cannington to Greenbank
21. Greenbank to Port Perry and Uxbridge.

Nipissing Development

In connection with the proposed development on the South river it was found necessary to acquire a number of parcels of land for flooding purposes.

Hanover Quarries

During the year the Commission disposed of the stone quarries in the township of Brant and of the Spur Line railway connecting this property with

the Grand Trunk railway. Hanover Stone and Cement, Limited, were the purchasers.

A number of other properties no longer required by the Commission were also disposed of.

Miscellaneous

The number of transactions carried to completion by the Department during the year is as follows:

Number of parcels of land purchased	51
Number of tower easements and overhang rights secured.....	128
Number of pole easements secured.....	83
Number of anchor agreements secured.....	98
Number of tree trimming agreements secured.....	169
Number of damage claims settled	181

SECTION II

TRANSMISSION SYSTEMS

NIAGARA SYSTEM

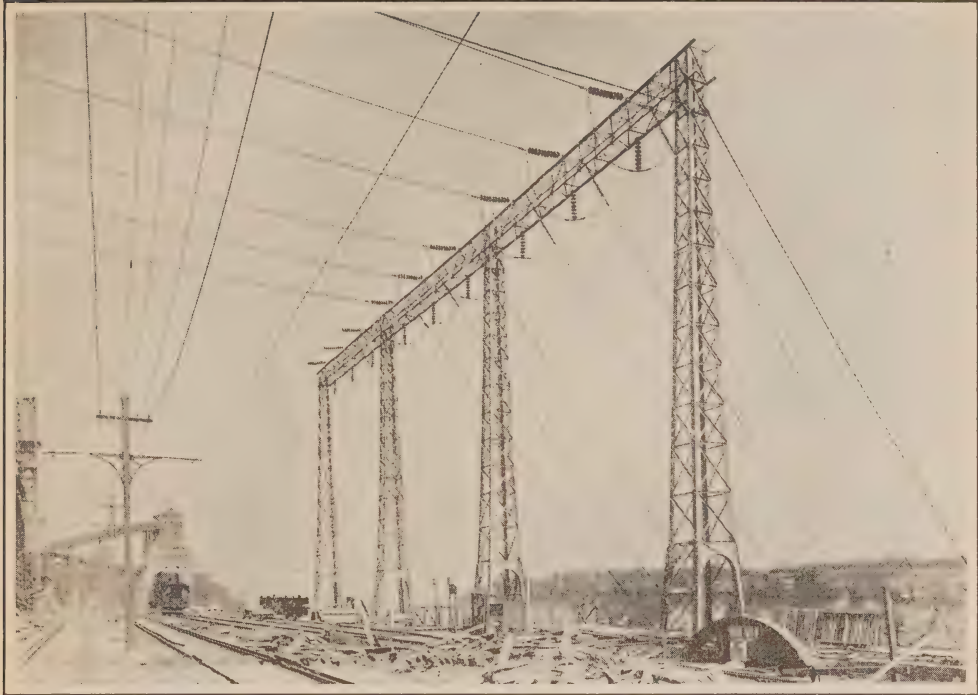
The principal work in hand at the beginning of the year was the development of the 110,000-volt lines of the Niagara system so as to connect the Queenston generating station with the existing lines and to provide for the delivery of the electrical energy from this new plant at points in the Province where the demand was increasing most rapidly. The loads of the Toronto and Hamilton districts required the most attention. During the year the tie line from Queenston generating station to the 110,000-volt trunk lines between Niagara Falls and Dundas was completed and put in operation. This line is now carrying 200,000 horsepower or more.

The new trunk line from Queenston generating station by way of Burlington Beach, to a point of intersection with the existing trunk lines between Dundas and Toronto, north of Burlington, has been completed as far as the new 110,000-volt station at East Hamilton and is in operation.

Negotiations have been carried on practically throughout the year regarding the right-of-way in the vicinity of Burlington Beach and along the streets and on public property in the city of Hamilton. These negotiations are still active and no construction work has been carried out on this section of line.

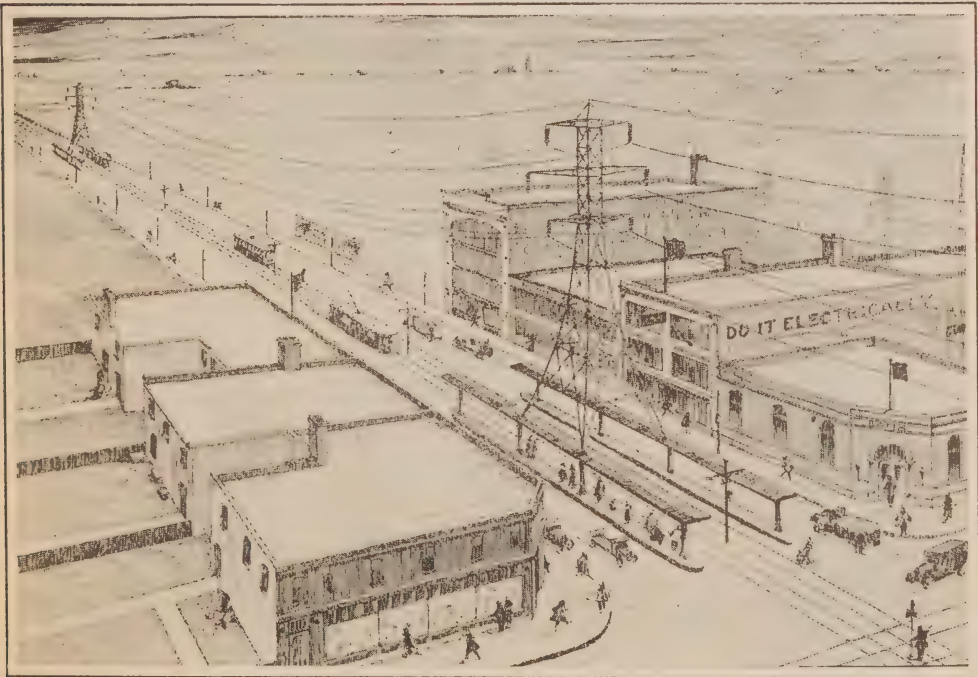
An appropriation has been made for preliminary work on a trunk line at 110,000 volts from Queenston generating station to the St. Thomas district.

The study of the transmission line network in the vicinity of Niagara Falls and Queenston in connection with these and other radiating lines brought out very clearly during the year the necessity for some co-ordinated scheme for such lines as they become more numerous in the various districts. A study of the situation also leads to the conclusion that provision should be made for the transportation of electrical energy in the same right-of-way as is already used for the transportation of goods and vehicular traffic. Some progress has been made in this connection in that two or three municipalities have adopted the principle of one-way traffic on pavements, and have approved of the carrying of steel structures along the boulevard or planting strip in the centre of a right-of-way 66 feet or more in width. In this they follow a practice common in foreign countries and one whose underlying principle has led to the development of the sketch, reproduced herewith, which indicates the possibilities of carrying a paved roadway or preferably one or more suburban trolley tracks within the tower area by erecting piers for the support of the tower at each side of the tracks or roadway. In the case of the trolley lines, this has a particular advantage, since the width of the boulevard or railway right-of-way from curb to curb must be sufficient to provide for loading platforms. The piers for the towers may either alternate with these loading platforms, which have a spacing of 500 to 700 feet, or may be used as supports for a small loading platform as indicated.



TRANSMISSION LINES—NIAGARA SYSTEM

Towers on Queenston escarpment wall for high-voltage (110,000 volts) outgoing lines from Nos. 1, 2 and 3 units in Queenston generating station. October 5, 1922



Sketch illustrating tentative scheme for using the one right-of-way for pedestrian, vehicular and railway traffic and for the transmission of electricity at high voltage

In order not to spoil good farm land and make it non-productive and a menace on account of weeds, tower rights were arranged and the towers erected in such a way as to interfere very little with the agricultural operations. The cut reproduced herewith and described as tower No. 117, shows a tree growing within the base of the tower. This indicates what may be done in this connection.

The cut of a semi-anchor tower, 3 degree angle, indicates standard practice at small angles for the Queenston-Burlington trunk line which is operated at 110,000 volts and which has a rated capacity of 50,000 horsepower per circuit.

The cut marked "New Welland Ship Canal Crossing," shows another section of this line. The conductors are 150 feet above the water. The tower in the foreground is 205 feet high.

Considerable alterations have been made in the grounded wire equipment throughout the system. As a result of interruptions to the 110,000-volt system on account of sleet storms during the year, it was decided that, where possible, all but one, and in some cases all, of these grounded protective wires should be removed from the steel towers, since their efficiency as protective equipment could not readily be measured and was therefore problematical, and since the failure of these ground wires accounts for a very large proportion of the interruptions. This work was completed during the year.

In order to reduce materially the length of time taken to get a system covering several hundred miles of territory back into service after it has been once interrupted, a considerable study of the communication systems to serve these power lines was made and wireless communication of various types was adopted during the year. Guided wave wireless has been given some attention. By this method emanations from an aerial paralleling the power wires for a short distance near the station are transferred to the power conductors. These are carried on these wires to some point where they are collected inductively on another receiving aerial. Several stations of this type have been installed and are giving fair satisfaction.

In order to increase the range and to eliminate the possibility of interruption of communication of this sort with power lines, standard radio distributing stations are being installed at a number of the more important stations.

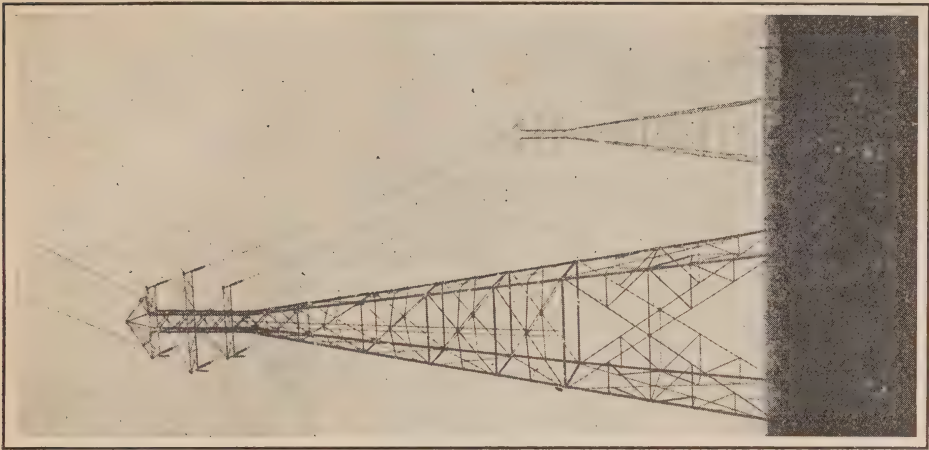
In addition to construction work, a great deal of attention was given the purchase of the Toronto and Niagara Power Company and allied organizations by the Commission. This purchase involved a great deal of detail work, including surveys, checking up of locations and examination of suitability of the properties presented for the structures and lines involved.

EUGENIA SYSTEM

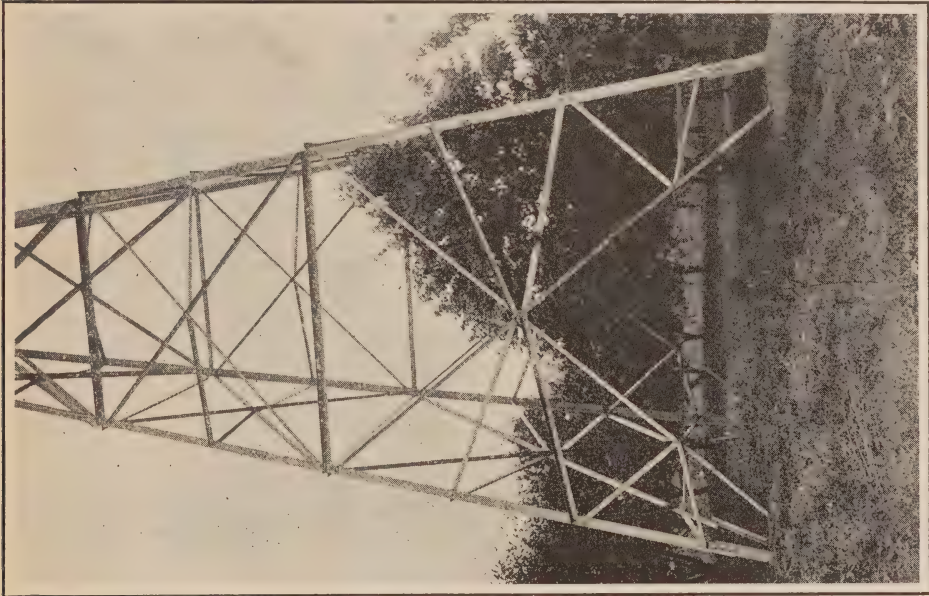
Considerable difficulty was experienced throughout this system in securing undertakings for the cost of revising lines where highway work interfered with the transmission structures. The line entrances and switching structures were revised at some of the stations, including Hanover.

WASDELLS SYSTEM

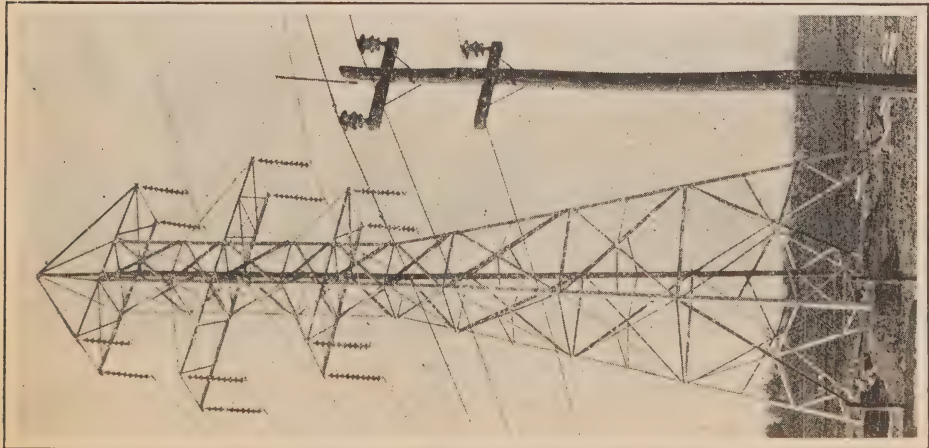
About 40 miles of low-tension lines were built during the year, the principal extension being in the Wasdells system to the south so as to serve municipalities in the vicinity of Uxbridge and Port Perry. Apart from these lines, the extensions were short and were installed largely to serve customers already located near the lines.



Queenston-Burlington trunk line crossing the new Welland ship canal. The conductors are 150 feet above water level and the tower in the foreground is 205 feet high. October 5, 1922



TRANSMISSION LINES—NIAGARA SYSTEM
Tree within base of tower No. 117, construction No. 120. October 5, 1922. See context



Semi-anchor tower, 3-degree angle. Typical of standard practice at small angles on the Queenston-Burlington trunk line. March 15, 1922

MUSKOKA SYSTEM

River crossings were revised and improved on this system, and a considerable investigation was undertaken, co-operating with the Bell Telephone Company in an effort to reduce materially the inductive interference of the district.

ST. LAWRENCE SYSTEM

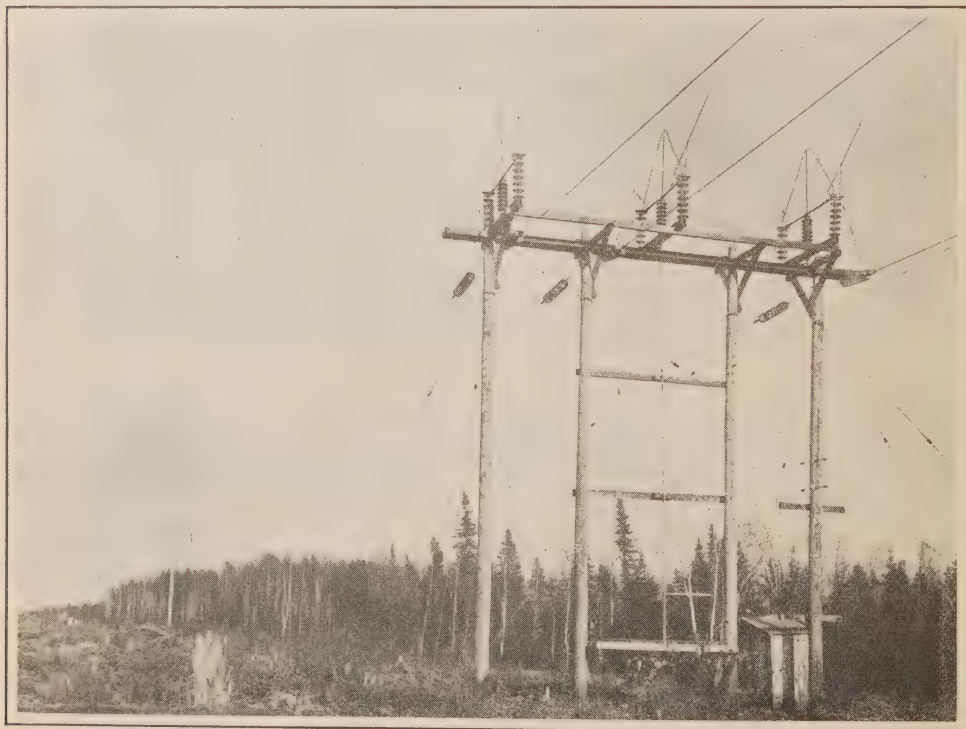
A considerable change was undertaken in the St. Lawrence system, where the transmission voltage has been changed from 26,400 to 44,000 volts. A small extension has been made at this voltage in Brockville so as to serve a large power consumer at that point. This revision is still receiving attention as the method of transmission is interfering more than ordinarily with the operation of communication circuits in the vicinity.

RIDEAU SYSTEM

Provision for additional distribution circuits on existing construction, revision of some of the air-break switches and special arrangements for the connecting in of a stone-crushing plant covers the work carried out during the year on this system.

THUNDER BAY SYSTEM

The cut marked "Switching Tower at Sibley" shows the switching structure and standard pole of the 110,000-volt, 60-cycle system which was completed recently between the Nipigon development and the "Twin Cities" at the "Head of the Lakes."



TRANSMISSION LINES—THUNDER BAY SYSTEM

Switching tower at Sibley on the Nipigon—Port Arthur, 110,000-volt, wood-pole transmission line.
October 25, 1921

OTTAWA SYSTEM

There are no lines requiring attention on this system.

CENTRAL ONTARIO AND TRENT SYSTEM

After much negotiation with private owners and with the Department of Railways and Canals, a connection was made from the new Ranney Falls development to the 44,000-volt lines of the system.

NIPISSING SYSTEM

Preliminary steps have been taken during the year for reduction of inductive interference and for lines to connect up proposed developments.

GENERAL

The restringing of a number of the low-tension circuits so as to provide larger conductor on account of increased loads and so as to eliminate conductors which are found to be of too low tensile strength is proceeding satisfactorily, several lines having been changed during the year.

In Appendix II. will be found tables relating to the different lines and systems built and operated by the Commission, or purchased from others.

The tabulation of lines as found in previous Annual Reports has been revised and brought up to date.

It is interesting to note in connection with these records that there are considerably more than 3,000 miles of structures now operating, exclusive of the rural districts, and that some 7,000 tons of conductor have been strung by the Commission, exclusive of the rural districts and purchases. Approximately one-half of this tonnage is strung on the 110,000-volt steel structures of the Niagara system.

DISTRIBUTION SYSTEMS

At the end of Appendix II, will be found a number of tabular statements giving the details of Rural and of Municipal Distribution Systems, Distribution Feeders and Metering Stations constructed, or under construction, by the Hydro-Electric Power Commission of Ontario up to October 31, 1922. The work of rural distribution was initiated consequent on the passing of "The Rural Hydro-Electric Distribution Act, 1921," which came into force on June 1, 1921. An amending Act—assented to June 13, 1921—was passed dealing only with questions appertaining to the financing of works constructed before or since June 1, 1921. The amending Act is given in Appendix I of this Report.

SECTION III

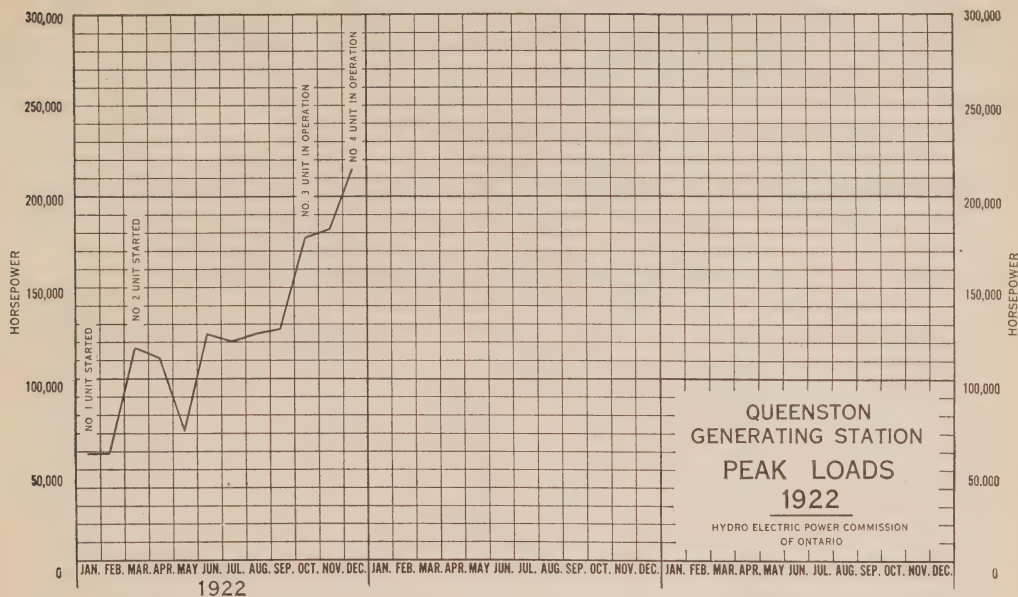
OPERATION OF THE SYSTEMS

The past year's operation of the various systems owned or controlled by the Commission has been marked by a great increase in the load. As will be seen from reference to the load curves given in this section, the increase has been general, occurring on most systems, and being particularly rapid during the latter part of the year.

While this increase in the load is encouraging and gratifying in many ways, it has in some respects added materially to the difficulties of operation, demanding constant vigilance on the part of the operating staff to see that no class of equipment in the numerous stations became overloaded. It made efficient operation essential, especially in the generating plants where the demand for power frequently threatened to exceed the generating capacity, while at the same time it increased the difficulty of getting apparatus out of service long enough for inspection, adjustment and necessary repairs. Increasing load also affected voltage regulation, demanding constant attention and adjustment. These problems have been common to nearly all systems, and the operating staff has had a busy year, although the innumerable details of the work cannot be given in a report of this nature. In the following sub-sections, dealing with the various systems, only outstanding events or changes materially affecting the operation of the system are reported.

As an illustration of the narrow margin of generating capacity over load within which the operating staff has been obliged to operate, the case of the first generator at Queenston may be mentioned. This unit, after short runs for testing and adjusting, was first placed in commercial, continuous service on January 26, at 3.08 a.m. On January 27, ice trouble at the plants of the Ontario Power Company and Canadian-Niagara Power Company reduced the amount of power available from these sources below the amount necessary to supply the demand, so that it was necessary to load the Queenston generator to full capacity. Had the Queenston unit not been available, it would have been necessary to restrict the supply of power to consumers. Somewhat similar conditions prevailed throughout the season, though not on such a close margin. Reference to the graph for Queenston load shows that the plant was called upon to meet greater demands each month that an additional generator became available, these demands approximating the full capacity of the generators, although the Ontario Power Company and the Toronto Power Company continued to carry full load, as shown by the load curves for those plants. From this it will be evident how closely the demand for power followed the increased generating capacity, how essential it was that no delay occurred in the construction or completion of additional generating capacity, and how difficult it was to take equipment out of service for maintenance work.

Reference to the table showing total power generated and capacity of all plants will show that the demand for power on other systems, besides the Niagara, has closely approached or exceeded the normal generating capacity, leaving little margin for operating contingencies or further increase of load, and rendering careful operation and maintenance of equipment vitally important.



In spite of the problems presented by the large increase in demand for power, and the difficulties under which the operating staff laboured, as efficient and continuous service has been given as was possible under the circumstances, and the year's operation on the whole has been very satisfactory.

Referring to the graphs showing the power demand on the various systems, it will be observed that the load rose more rapidly after August. The coal famine undoubtedly played a part in this increase, and electric heaters did much to relieve the situation where fuel was not obtainable, but it is impossible to determine just how much of the increase can be ascribed to this cause. Though the fact is not so evident from first inspection of the load curves, due to the usual dropping off in load during the summer months, a study of load conditions reveals that during July and August, when electricity would not be required for heating, there was on most systems a remarkable increase in the demand for power over the amounts required in the same months of the previous year. The Niagara system shows an increase of over 30,000 horsepower for July and August as compared with the same months of the preceding year, an increase of about 18 per cent; the Central Ontario system, the next largest, shows a growth of over 5,000 horsepower in the same months, or about 24 per cent increase; the Ottawa system, 23 per cent; the combined Northern systems, 16 per cent; the Muskoka system, 24 per cent; the Rideau system, 45 per cent; and the Nipissing system, 10 per cent. Due to special conditions, such as large power customers, the St. Lawrence system shows a slight decrease during these months, and the Thunder Bay system only a slight increase. It is evident, therefore, that the growth of load cannot be ascribed, except in a small part, to the abnormal conditions arising out of the coal shortage. It is appropriate here to remark that published statistics and curves representing comparative employment conditions in Canada, show a rapid rise in the number of persons employed during the latter part of the year 1922; and also that the curve of employment and the load curves for most systems resemble each other in the steep rise which is manifest towards the end of the year. It is natural that there should be some relation between general industrial conditions and the demand for power. This is interesting in connection with the operation of hydro-electric

plants because it indicates that the increase in power requirements during 1922 is due to an improvement in business conditions, and further that if this improvement increases, a still greater supply of power will be required and thus make heavier demands upon electrical stations and equipment.

Below is given a table of all the generating stations controlled by the Commission, showing their total output for the year, and also showing the total power purchased. This table shows the immense amount of power being handled by the Commission, making it one of the largest power organizations in the world—the largest for which figures are at present available.

In view of the stress which has resulted from coal shortage it is of interest to consider what would have been the effect on the people of the province of Ontario if it had been necessary to generate *from coal* the immense amount of power produced in hydro-electric plants as shown by the table below. The determination of what would have been the exact amount of coal thus required would depend upon a variety of governing circumstances, but undoubtedly several millions of tons of additional coal would have been required. This coal could not have been obtained without encroaching upon the coal required for other necessary purposes. The demand for such a large additional amount of coal would, inevitably, have added a serious burden to the people of this Province, and, further, would have entailed the sending out of the country of very large sums of money and placed a load upon railway equipment already taxed beyond its capacity. In fact the extra coal could not have been transported without seriously interfering with the transport of other commodities.

In the following table, a column is given headed, "Normal Operating Capacity." The capacity of a plant may be given on bases which differ widely, so that a few words of explanation seem advisable in case differences are noted between figures given in this table and others which may appear in other sections of this report. Manufacturer's rating, or nameplate rating, is most generally quoted in this connection. Generators and electrical equipment are now usually rated in kv-a, and existing power factor or an estimated power factor must be taken into the calculation in order to express same in horsepower. In some cases manufacturer's rating is given in kw., but this is based on an arbitrarily assumed figure for power factor, ranging from 80 per cent to 100 per cent, and consequently the horsepower ratings may differ widely for similar machines. Moreover, the capacity of the turbines, transformers, or other equipment, may affect the total for the plant. Again, the actual available capacity may be considerably less than figures on the above basis, due to special conditions such as equipment out of order, insufficient water and various temporary conditions. We have, therefore, selected the normal operating capacity as applying more uniformly to the various types of generators and plants, and indicating more correctly the power actually available under normal conditions. It is to be understood that this table does not give the maximum capacity of the plants, nor the output possible for short periods or under unusually favourable conditions.

The capacity given for the Ontario Power Company plant is exclusive of the two disabled generators, although these were available during the first part of the year. The peak load for the year occurred at this plant when all sixteen generators were in service.

The totals given for the peak loads are the arithmetical sums of the individual peaks, without any allowance for diversity.

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

TOTAL POWER GENERATED AND PURCHASED

Plant	Normal operating capacity horsepower	Peak load horsepower	Total output during fiscal year kilowatt-hours
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HYDRO-ELECTRIC GENERATING PLANTS

Queenston (3 units in operation).....	175,000	178,955	292,547,900
Erindale.....	800	918	420,850
Ontario Power Co.....	171,000	199,700	731,569,600
Toronto Power Co.....	145,000	149,410	632,618,000
Big Chute.....	5,760	5,790	20,859,880
Eugenia Falls.....	6,170	6,099	13,270,200
Wasdells Falls.....	940	992	3,511,089 *
South Falls.....	1,400	1,464	5,300,881 *
High Falls.....	2,400	2,413	5,471,400
Carleton Place.....	400	422	60,305
Cameron Falls.....	26,000	10,724	40,392,000
Sidney, Dam No. 2.....	4,020	5,362	18,497,900
Frankford, Dam No. 5.....	3,485	3,753	14,353,050
Ranney Falls, Dam No. 10.....	9,650	10,590	6,243,360
Campbellford, Dam No. 11.....	4,020	4,370	16,753,400
Healey Falls, Dam No. 14.....	12,060	15,885	33,030,515
Auburn, Dam No. 18.....	2,010	2,493	11,498,850
Fenelon Falls, Dam No. 30.....	1,000	938	3,352,575
Nipissing.....	1,740	1,696	6,238,660
Totals, hydro-electric plants.....	572,855	601,974	1,855,990,415

* Estimated.

STEAM PLANTS

Toronto Power Co., Toronto, (peak rating).....	20,000	9,380	150,000
Nipissing system, North Bay.....	470	Not in operation	
Totals, steam plants.....	20,470	9,380	150,000

POWER PURCHASED

Plant	Contract amount horsepower	Peak horsepower	Total purchased kilowatt-hours
Canadian Niagara Power Co.....	91,000 †	91,000	320,309,300
Niagara Falls Power Co.....			56,427,860
Cedar Rapids Power Co.....	4,905	4,905	14,613,500
Rideau Power Co.....	650	1,072	2,671,006
Orillia Water, Light & Power Commission..	800	2,400	993,466
Ottawa & Hull Power and Mfg. Co.....	12,000	11,394	38,801,044
Campbellford Water & Light Commission..	1,609	2,145	1,728,490
Peterboro Hydraulic Power Co.....		3,135	1,387,679
Fenelon Falls Town Plant.....		268	56,010
Nassau (C.G.E. Co. exchange power).....		1,675	318,830
	110,964	117,994	437,307,185
Grand totals.....	704,289	729,348	2,293,447,600

† Short term agreements.

NIAGARA SYSTEM

The most notable and outstanding feature in the operation of the Niagara system during the year ended October 31, 1922, was the placing in operation of the Queenston plant, the first unit of 60,000 horsepower being placed in commercial service January 26, 1922. The second unit of similar capacity was available March 16, the third unit on October 3, but even with this large block of additional power the Commission is barely able to meet the demand of the municipalities. The increase in the system demand was most remarkable, and it was very fortunate for the Niagara System municipalities and customers that the Queenston plant was available for their demands. The operation of the plant was most satisfactory considering the existing conditions in that a great amount of construction work was being carried on all the year.

Early in November, 1921, arrangements were completed with the Niagara Falls Power Company to supply the output of two machines, totalling 8,400 kilowatts, to the Commission's Niagara station, and this capacity was available for the Niagara System demands on November 13, 1921. At this time the entire available supply from the Niagara plants was in use, and it was fortunate for the Hydro customers that conditions on the United States' side of the line were such that the Commission was able to secure this additional capacity. This supply was discontinued on February 2, 1922, since the No. 1 Queenston unit had been placed in service a few days previously.

The supply of power to the Commission's Niagara step-up station from the Ontario Power Company was most satisfactory, although it was necessary for a short period following trouble at the Ontario Power Company plant on April 20, 1922, to obtain 8,400 kilowatts from the Niagara Falls Power Company.

Due to the winter of 1921-22 being fairly moderate, the Canadian Niagara Power Company did not experience extensive trouble from ice conditions, and thus the Commission's supply of power to the Niagara step-up station from that source was practically constant and continuous.

During the year power was supplied to the main 110,000-volt switching station at Dundas 99.923 per cent. of the total time, and had it not been for the severe sleet and ice storms of February 22 and March 31, the outage would have been practically nil. The storm of February 22 and 23 hit the 110,000-volt lines between Niagara and Dundas, practically all the lines in the Dundas, Guelph, Preston, Kitchener, Stratford, St. Marys, Brantford and Woodstock districts, and to a lesser extent the lines in the London district, while the St. Thomas, Chatham and Windsor districts escaped intact. The storm was the worst in the history of the Commission up to that time, and the damage caused to power and communication circuits was very extensive. The storm of March 31 exceeded in severity that of February 22, causing damage to towers, poles and conductors proportionately greater. Following so closely on the February 22 storm, before the repairs made necessary by that storm had been completed and covering much the same territory, the storm was much the worst ever experienced by the Commission in its twelve years of operation. Old operating men report they can recall no occasion when the ice conditions approached those experienced at this time in the districts involved.

During the year sixty-four electrical storms were experienced on fifty-two days, the first occurring on February 19, and the last on October 10. Sixteen of the storms were of a general nature, traversing the entire system, while five

were very severe. The fact that very little equipment was damaged during the lightning season shows quite conclusively that the lightning protection installed on the system was equal to the task of relieving the system of dangerous voltage surges.

In anticipation of increased demands on a number of our transformer stations, extensive changes have been carried out and the transformer capacity increased. At London high-tension station a bank of three 5,000-kv-a. transformers replaced a bank of three 2,500-kv-a. units; at Guelph high-tension station the 2,500-kv-a. bank from London replaced a 1,250-kv-a. bank; at Preston high-tension station a 1,250-kv-a. bank replaced a 750-kv-a. bank and the 6,600-volt distribution from this point was discontinued in favour of 13,200-volt distribution; at Kent high-tension station a bank of three 2,500-kv-a. transformers replaced the bank of three 1,250-kv-a. transformers; at Essex high-tension station the capacity was increased by the addition of a bank of three 5,000-kv-a. transformers.

The first 110,000-volt out-door type station, with an initial capacity of 15,000 kv-a. was successfully placed in commercial service on October 8, 1922. This station is located in the east end of Hamilton and supplies a portion of the Hamilton load.

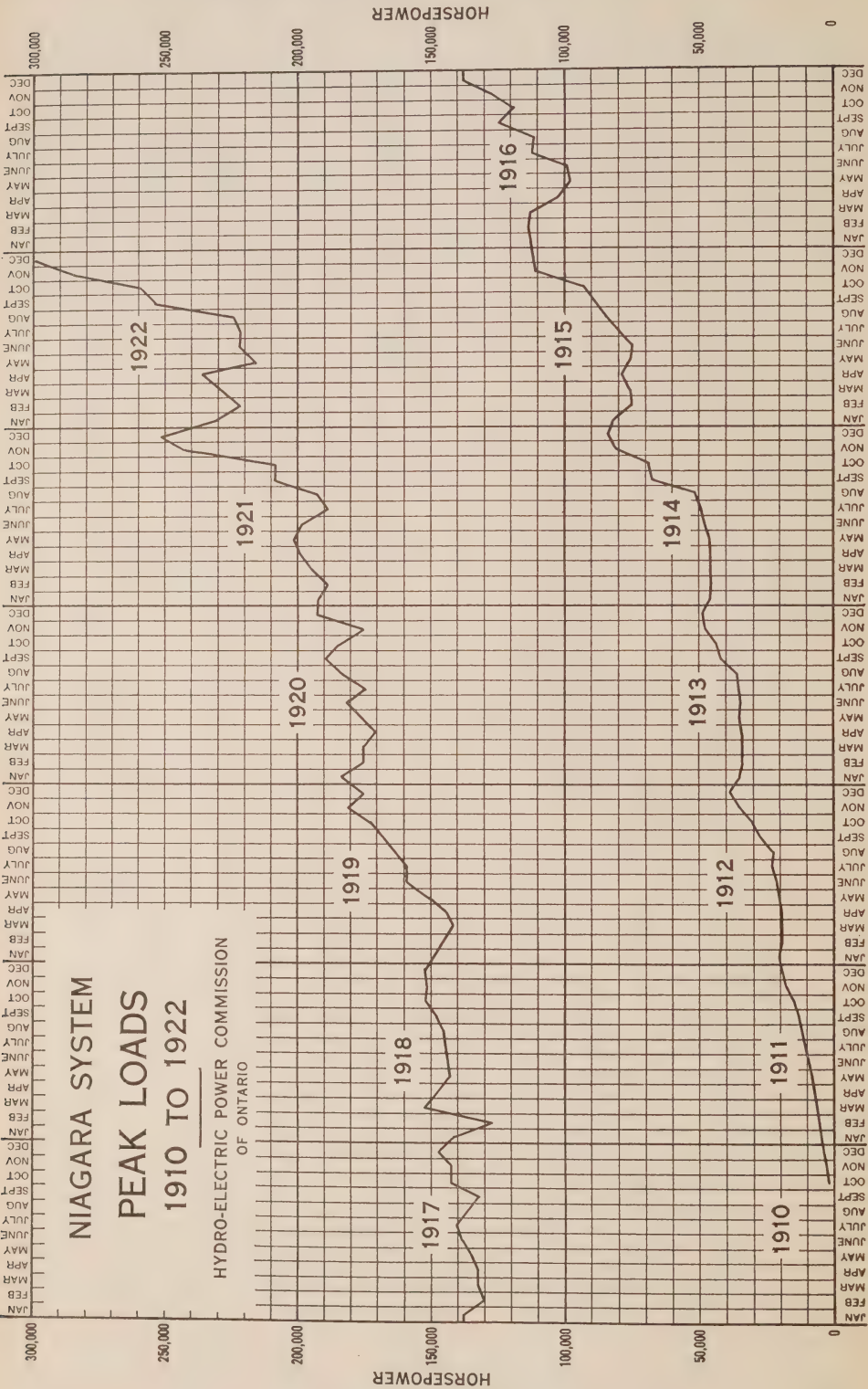
Changes in transformer capacity were made at a number of distributing stations as follows: The 75-kv-a. transformer at Milverton station was replaced with a 150-kv-a. bank; at Oil Springs, one 150-kv-a. three-phase transformer replaced one 75-kv-a. three-phase unit; at Watford one 150-kv-a. three phase transformer replaced one 50-kv-a. three-phase unit.

The load supplied from the Mimico station was transferred to the Etobicoke station and the Mimico station abandoned for the present.

The Dominion Sugar Company station, Saltfleet station, the Streetsville Lumber Company station, and the Galt, Preston & Hespeler Railway station at Preston, were satisfactorily placed in service, and power was supplied Port Dover, Brantford Sand & Gravel Company, Alvinston and Thedford from existing substations.

The line maintenance field force has been actively engaged in carrying out the numerous routine duties necessary in the maintenance and upkeep of hundreds of miles of transmission lines of varying voltages and capacities. These lines are all patrolled at stated intervals and minor repairs effected by the patrolmen who are located at suitable points on the system. Considerable tree trimming is carried on during the early spring and on all lines along the provincial highways the trimming is done under the supervision of the Provincial Forester. During the summer months the insulation of a number of the 110,000-volt lines was checked, this involving the testing of 162,918 units, of which 1.8 per cent. proved defective and were replaced. A considerable staff was employed in carrying out changes and revisions to low-tension feeders brought about by Provincial Highway construction, and in effecting repairs to lines damaged during the ice storms of February 22, and March 31. The double circuiting of the 110,000-volt lines from Dundas to Kitchener was completed early in the year. The work of removing all ground cable from the 110,000-volt lines, with the exception of one cable carried on the peak of the tower, and the reinforcing of the loops on the 110,000-volt lines between Niagara and Toronto has been actively pressed and it is expected to have same completed early in the coming year.

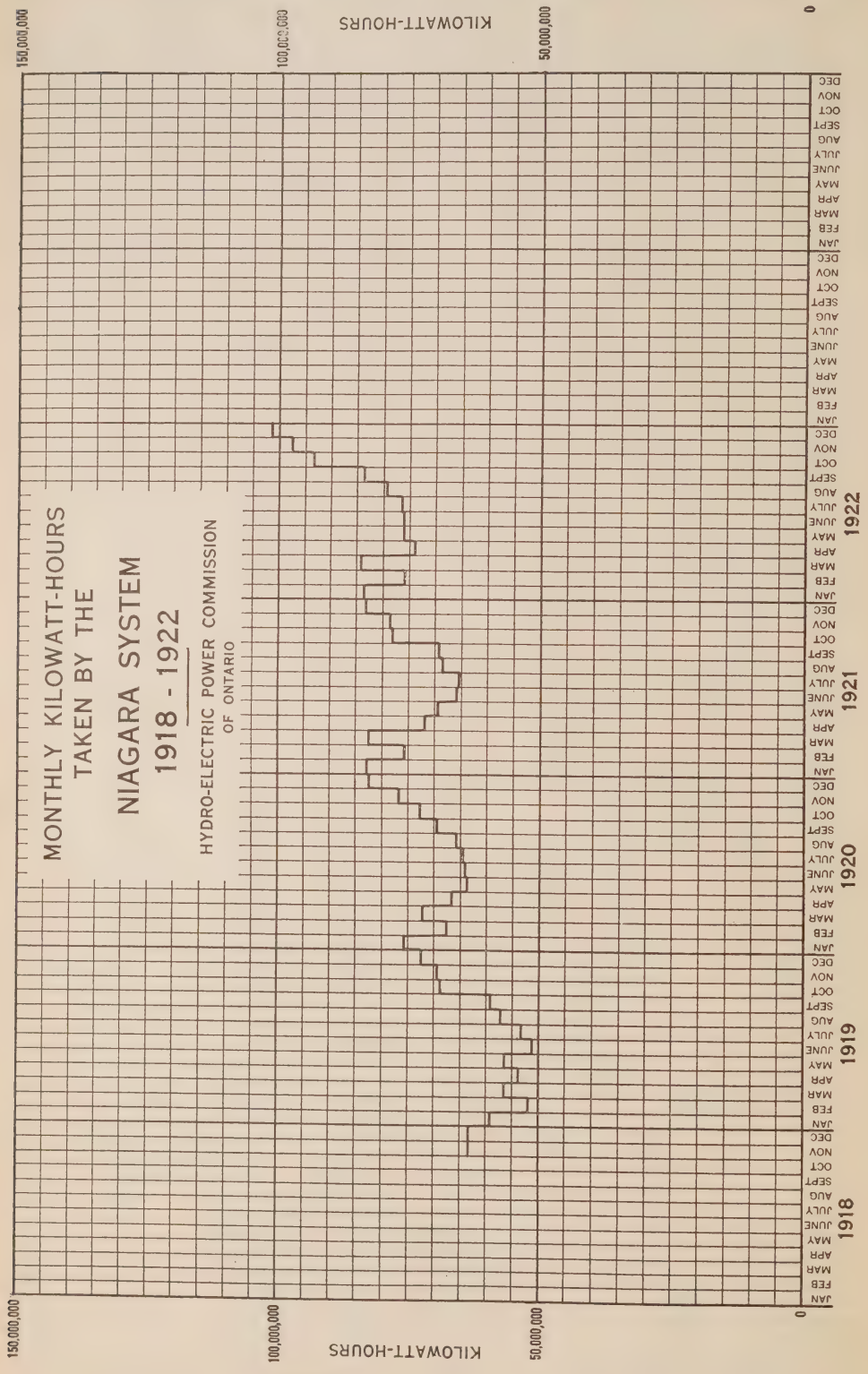
The station maintenance field staff have been fully employed in maintaining the many Commission properties and buildings with their equipment necessary



in the transformation and distribution of power to the large number of municipalities and customers in the district comprising the entire south-western portion of the province. A few of the many duties performed by this staff consist of the periodic overhauling of oil breakers, batteries, transformers, lightning arresters, pumps, condensers and the repairing of transformers and other equipment which fail in service.

NIAGARA SYSTEM—LOADS OF MUNICIPALITIES, 1920 TO 1922

Municipality	Peak load in horsepower			Change in load, 1921-1922	
	Oct., 1920	Oct., 1921	Oct., 1922	Decrease	Increase
Acton.....	193.0	229.2	261.3	....	32.1
Ailsa Craig.....	128.6	134.0	112.6	21.4	....
Aylmer.....	172.0	194.3	217.7	....	23.4
Ayr.....	77.2	71.0	84.4	....	13.4
Baden.....	175.6	167.5	155.5	12.0	....
Beachville.....	223.0	221.0	268.0	....	47.0
Blenheim.....	134.0	156.8	202.4	....	45.6
Bolton.....	105.9	132.7	122.7	10.0	....
Bothwell.....	120.6	116.3	124.0	....	7.7
Brampton.....	965.0	969.0	1,072.3	....	103.3
Brantford.....	4,162.0	4,866.0	5,811.0	....	945.0
Brigden.....	107.1	111.2	35.5	75.7	....
Burford.....	37.8	53.6	58.7	....	5.1
Burgessville.....	42.4	43.8	45.5	....	1.7
Caledonia.....	83.0	106.4	118.0	....	11.6
Chatham.....	2,151.5	2,240.0	3,056.3	....	816.3
Chippawa Village.....	....	98.0	79.0	19.0	....
Clinton.....	154.0	170.2	186.3	....	16.1
Comber.....	135.4	102.4	99.0	3.4	....
Cooksville.....	....	80.4	100.8	....	20.4
Dashwood.....	52.6	50.2	43.7	6.5	....
Delaware.....	11.7	16.0	16.6	....	0.6
Dereham Township.....	....	59.2	62.4	....	3.2
Dixie.....	....	80.4	100.8	....	20.4
Dorchester.....	89.8	30.5	21.4	9.1	....
Drayton.....	48.2	59.7	56.3	3.4	....
Dresden.....	196.3	196.3	177.0	19.3	....
Drumbo.....	21.0	20.3	35.1	....	14.8
Dublin.....	45.3	45.3	30.2	15.1	....
Dundas.....	1,132.7	921.0	1,024.0	....	103.0
Dunnville.....	241.3	282.8	348.5	....	65.7
Dutton.....	107.2	111.2	115.2	....	4.0
Elmira.....	213.0	240.0	415.5	....	175.5
Elora.....	194.3	202.6	272.0	....	69.4
Embro.....	58.4	60.3	63.5	....	3.2
Essex County System.....	1,126.0	1,213.0	2,250.6	....	1,037.6
Etobicoke Township.....	335.0	431.6	663.5	....	231.9
Exeter.....	175.6	186.3	232.0	....	45.7
Fergus.....	185.0	245.3	295.0	....	49.7
Forest.....	116.0	136.7	133.5	3.2	....
Galt.....	2,931.5	3,485.2	4,222.5	....	737.3
Georgetown.....	524.0	496.0	536.0	....	40.0
Glencoe.....	67.5	74.5	79.8	....	5.3
Goderich.....	496.0	439.6	510.7	....	71.1
Grantham Township.....	26.0	35.9	46.3	....	10.4
Granton.....	67.7	64.0	62.9	1.1	....
Guelph.....	3,638.0	4,249.3	4,689.0	....	439.7
Central Prison Farm.....	160.8	136.7	191.0	....	54.3
Ontario Agricultural College.....	166.2	187.6	221.0	....	33.4



NIAGARA SYSTEM—LOADS OF MUNICIPALITIES, 1920 TO 1922—Continued

Municipality	Peak load in horsepower			Change in load, 1921-1922	
	Oct., 1920	Oct., 1921	Oct., 1922	Decrease	Increase
Hagersville.....	260.0	431.6	536.0	....	104.4
Hamilton.....	17,895.0	16,837.4	21,542.0	....	4,704.6
Harriston.....	227.8	193.0	171.5	21.5	....
Hensall.....	85.7	49.3	60.7	....	11.4
Hespeler.....	348.5	453.0	509.3	....	56.3
Highgate.....	86.0	85.8	73.4	12.4	....
Humberstone.....	....	56.0	55.0	1.0	....
Ingersoll.....	1,085.7	911.5	1,323.0	....	411.5
Kitchener.....	6,648.8	7,171.6	7,868.6	....	697.0
Lambeth.....	22.7	26.2	42.9	....	16.7
Listowel.....	453.0	482.5	394.0	88.5	....
London.....	10,656.8	12,392.7	16,422.0	....	4,029.3
Lucan.....	216.6	185.0	116.6	68.4	....
Lynden.....	87.8	76.4	83.0	....	6.6
Markham.....	37.0	61.0	83.6	....	22.6
Merritton.....	....	217.0	273.4	....	56.4
Milton.....	670.0	737.2	923.5	....	186.3
Milverton.....	290.8	207.7	340.4	....	132.7
Mimico.....	388.7	551.0	812.3	....	261.3
Mimico Asylum.....	37.5	37.5	37.5	....	....
Mitchell.....	195.7	195.7	241.2	....	45.5
Montrose Sta., Chippawa Dev'nt...	....	6,434.3	2,237.0	4,197.3	....
Moorefield.....	123.5	49.6	47.5	2.1	....
Mount Brydges.....	23.1	30.5	30.1	0.4	....
Newbury.....	....	22.7	21.4	1.3	....
New Hamburg.....	236.0	248.0	277.4	....	29.4
New Toronto.....	3,284.2	1,356.5	1,863.3	....	506.8
Niagara Falls.....	3,610.0	3,706.4	4,646.0	....	939.6
Niagara-on-the-Lake.....	229.2	197.0	205.4	....	8.4
Norwich.....	223.0	277.4	360.5	....	83.1
Oil Springs.....	95.0	171.5	223.8	....	52.3
Otterville.....	33.5	39.4	44.2	....	4.8
Palmerston.....	191.6	227.8	202.4	25.4	....
Paris.....	643.4	703.7	904.8	....	201.1
Parkhill.....	48.2	57.6	65.2	....	7.6
Petersburg and St. Agatha.....	17.0	26.8	25.2	1.6	....
Petrolia.....	442.3	449.0	536.0	....	87.0
Plattsville.....	100.5	32.0	28.1	3.9	....
Port Colborne.....	270.0	332.0	398.0	....	66.0
Port Credit.....	103.2	138.0	186.3	....	48.3
Port Dalhousie.....	144.7	143.4	152.8	....	9.4
Port Robinson.....	....	314.0	314.0	....	....
Port Stanley.....	124.6	193.0	144.7	48.3	....
Preston.....	1,485.2	1,599.2	2,024.0	....	424.8
Preston Rural.....	....	96.5	110.4	....	13.9
Princeton.....	15.6	17.9	24.0	....	6.1
Provincial Brick Yard.....	123.3	147.4	160.8	....	13.4
Queenston.....	....	25.4	37.5	....	12.1
Ridgetown.....	173.6	201.0	249.8	....	48.8
Rockwood.....	41.2	42.8	50.4	....	7.6
Rodney.....	91.6	103.2	110.2	....	7.0

NIAGARA SYSTEM—LOADS OF MUNICIPALITIES, 1920 TO 1922—Continued

Municipality	Peak load in horsepower			Change in load, 1921-1922	
	Oct., 1920	Oct., 1921	Oct., 1922	Decrease	Increase
St. Catharines.....	3,477.0	3,720.0	5,120.0	.....	1,400.0
St. George.....	60.3	86.4	60.3	26.1	.....
St. Jacobs.....	88.4	75.0	32.0	43.0	.....
St. Marys.....	878.0	918.2	744.0	174.2	.....
St. Thomas.....	2,417.0	2,658.0	3,025.4	.....	367.4
Sarnia.....	2,795.0	3,002.7	3,526.0	.....	523.3
Scarboro Township.....	.....	242.0	366.9	.....	124.9
Seaforth.....	281.5	242.6	308.3	.....	65.7
Simcoe.....	214.4	336.4	430.3	.....	93.9
South Dorchester.....	.....	6.7	6.7	.....	.....
Springfield.....	.....	16.0	24.7	.....	8.7
Stamford Township.....	423.5	465.0	761.3	.....	296.3
Stratford.....	2,024.0	2,372.6	3,760.0	.....	1,387.4
Strathroy.....	387.4	378.0	454.0	.....	76.0
Streetsville.....	.....	246.6	329.7	.....	83.1
Tavistock.....	264.0	262.7	127.3	135.4	.....
Thamesford.....	83.0	105.2	87.0	18.2	.....
Thamesville.....	62.7	83.0	79.0	4.0	.....
Thornedale.....	110.0	107.7	66.8	40.9	.....
Tilbury.....	131.3	148.7	203.7	.....	55.0
Tillsonburg.....	819.0	325.7	368.3	.....	42.6
Toronto.....	59,598.0	68,573.7	87,600.5	.....	19,026.8
Toronto Township.....	.....	284.7	405.0	.....	120.3
Walkerville.....	3,686.3	3,311.0	4,705.0	.....	1,394.0
Wallaceburg.....	871.0	486.5	864.6	.....	378.1
Wardsville.....	.....	10.0	12.8	.....	2.8
Waterdown.....	104.5	110.8	112.0	.....	1.2
Waterford.....	138.6	143.4	187.6	.....	44.2
Waterloo.....	1,214.4	1,327.0	1,525.4	.....	198.4
Watford.....	72.3	67.9	96.0	.....	28.1
Welland.....	3,103.2	1,359.0	1,675.7	.....	316.7
Wellesley.....	114.0	124.6	127.3	.....	2.7
West Lorne.....	122.0	166.2	194.3	.....	28.1
Weston.....	927.6	899.4	1,402.0	.....	502.6
Windsor.....	4,037.0	6,266.7	9,001.3	.....	2,734.6
Woodbridge.....	146.0	182.3	165.0	17.3	.....
Woodstock.....	1,643.5	1,988.0	2,260.0	.....	272.0
Wyoming.....	41.5	40.2	39.4	0.8	.....
Zurich.....	80.6	77.8	84.3	.....	6.5

NIAGARA SYSTEM—NEW MUNICIPALITIES

Municipality	Date connected	Load in horsepower		Increase in horsepower
		Initial	Oct., 1922	
Alvinston.....	Mar. 22, 1922	40.2	83.3	43.1
Port Dover.....	Dec. 22, 1921	65.6	73.7	8.1
Thedford.....	May 18, 1922	33.5	42.6	9.1

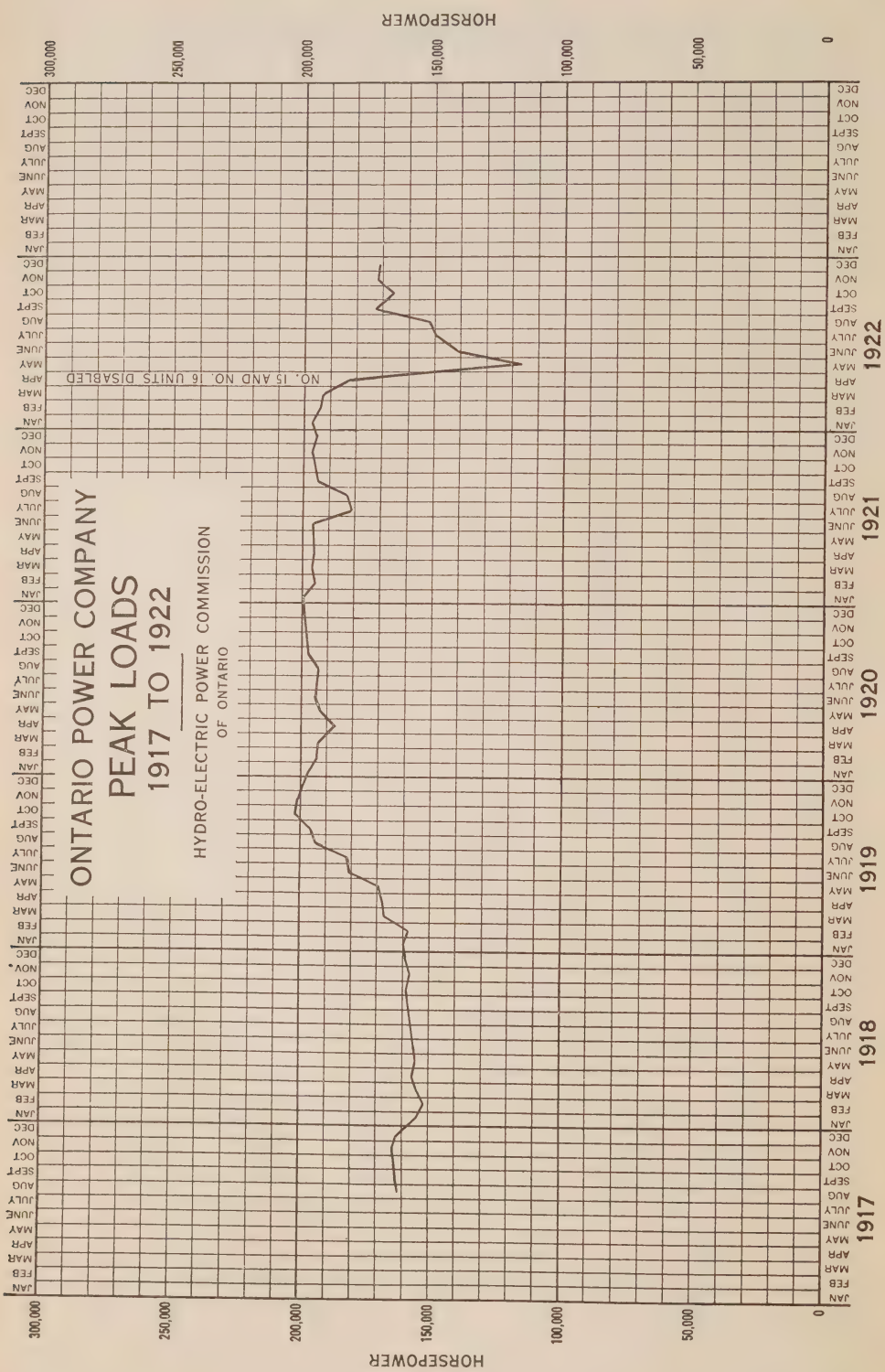
ONTARIO POWER COMPANY

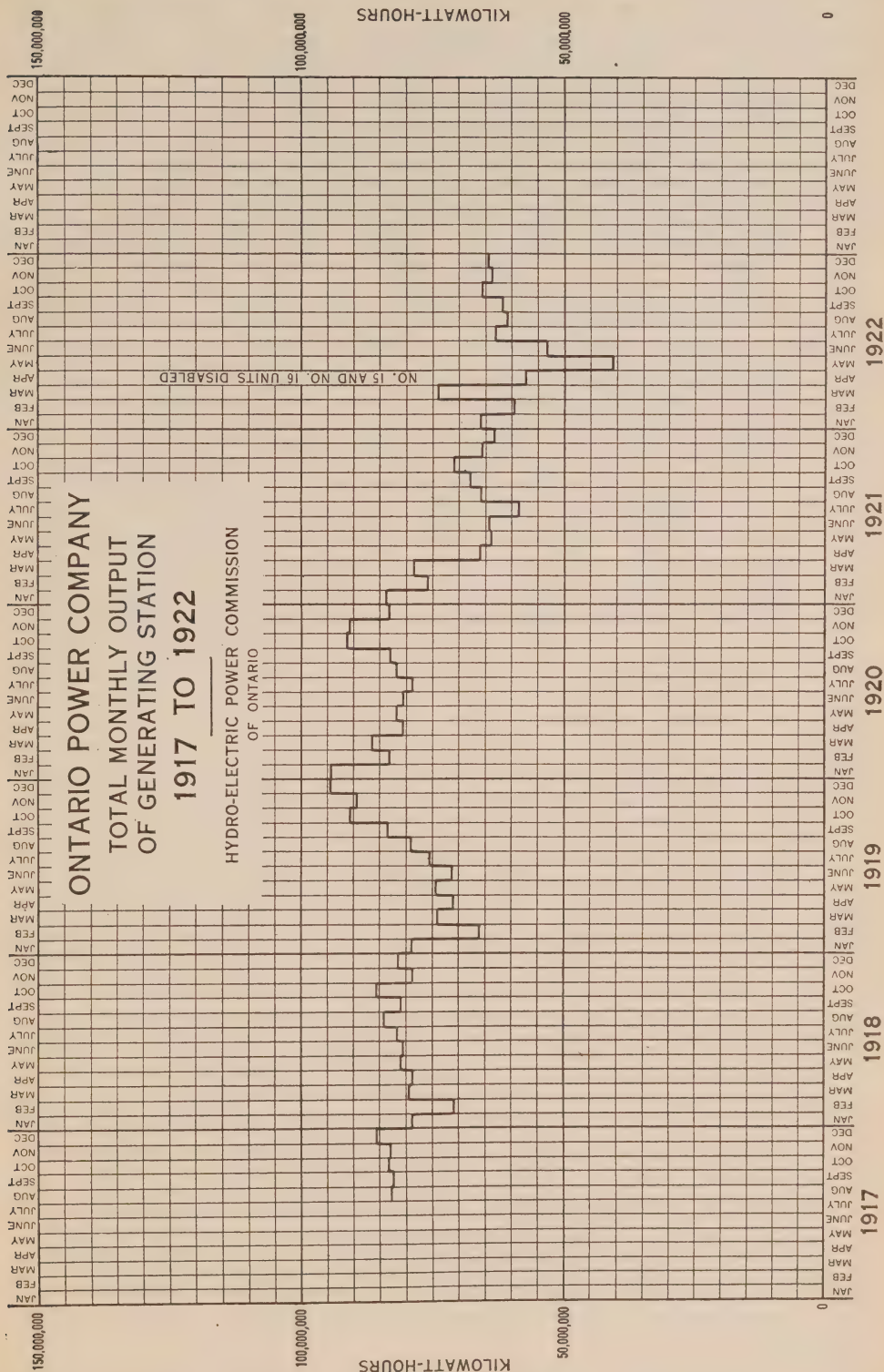
The favourable weather during last winter enabled the Ontario Power Company plant to be operated with little or no interference from ice and no serious curtailment of power was occasioned at any time. However, the usual preparations for the maintenance of equipment damaged by ice were made, although fortunately not required.

By improvements in the system of heating at the forebay a saving of over 40 tons of coal was made during the winter. Enough in fact to make it unnecessary to purchase any coal at all during the current year, the balance on hand being sufficient to meet the anticipated use for the winter of 1922-1923.

The method of disposing of ice in the screen house during the winter months has been greatly improved by the erection of a curtain wall which cuts off heavy cross current at the ice disposal chute. The quantity of ice that can now be handled has been increased many times and the labour formerly required has been almost entirely eliminated. The cost of these improvements has been very small and the entire expense saved in one month's operation. Experience to date has shown that the improved ice disposal chute will not only decrease the cost of handling ice during the winter months but will eliminate most of the ice that formerly could not be prevented from passing through the turbines.

On April 20, an accident totally destroyed No. 15 generator, badly wrecked No. 16 unit and occasioned the temporary shut-down of four other machines in the plant. Following a heavy short-circuit, No. 15 generator water wheel ran away and attained a speed at which the generator rotor burst. A comprehensive and thorough investigation has shown beyond reasonable doubt that the cause of the failure of the generator was defective castings in the rotor rims. The generator, which had been purchased on the most exacting specifications and which was built during the recent war, was designed to withstand a runaway speed about 10 per cent in excess of the maximum speed of the water wheel, but due to the failure of the rim castings to meet requirements, it went to pieces. The bursting of No. 15 generator caused the collapse of the roof trusses, bringing down the heavy concrete roof, which knocked a large piece from the turbine casing of this unit, allowing water to be discharged into the power house for about four minutes. The prompt closing of the main penstock valve on the damaged turbine prevented the entire power house from being flooded, and showed conclusively that a valve of modern design could be closed safely and quickly with practically free discharge through a penstock 10 ft. 6 in. in diameter. The generator that failed was not tested to runaway speed when first installed in 1919 due to load conditions which made such a test inadvisable. Had this test been made the machine would, no doubt, have gone to pieces with disastrous results, as at that time it would have been impossible to have obtained sufficient power to meet the loss of output from the damaged machines, either from Queenston station, which was hardly under construction in 1919, or from purchased power. Serious as this accident was, it did not, however, interfere in any way with the power supply to the Commission's customers. The trouble occurred at 2.44 a.m., and by 7.30 a.m. generating capacity was available to replace the damaged equipment and to carry the day's load. The generating capacity disabled amounted to 25,000 kilowatts, while 40,000 kilowatts was temporarily put out of service from the flooding of four generators. The total loss in output was, therefore, 65,000 kilowatts. In replacing this power supply, use was made of existing tie lines between the Ontario Power Company's plants and the stations of the Toronto Power Company, Canadian Niagara





Power Company and the Niagara Falls Power Company. By the co-operation of these companies, who fortunately had generating capacity available, and with the assistance of the Niagara, Lockport and Ontario Power Company, it was possible to make good the power shortage before the day load came on, so that no customers were inconvenienced.

The generators damaged by water were started drying out at the earliest possible moment and three of the machines were placed in service after being dried out and tested. The fourth machine was completely rewound, the salvaged coils being dried out after removal from the machine and returned to storage as spares.

During the early spring trouble developed on No. 1 nine-foot valve, apparently due to the failure of the operating screws. It was decided that new screws and nuts would be required for this valve, and as valves Nos. 2, 3, 4, 5 and 6 had been in service the same length of time, it was thought advisable to replace the nuts in them and to clean out the accumulated sand and gravel in the bonnets of the valves. This programme of work required a shut-down of No. 1 pipe line which feeds the first six units in the plant. All of the work was carried out successfully, and while the condition of the screws and nuts was such as to make necessary the immediate replacement of the nuts and will require renewal of the screws in a short time, the permanent structure of the valves was found to be in good condition.

During the interval No. 1 pipe line was shut down for these repairs, a complete inspection of its interior was made.

The No. 1 pipe line is a steel conduit 18 feet in diameter built of $\frac{1}{2}$ inch rolled plate incased in a 12 inch concrete envelope. It is 6,500 feet long and sweeps in a long curve from the head works above the upper Niagara rapids to the power house just below the falls. The pipe line, head gate and penstock valves were placed in operation in 1905 and have been continuously used since that time. The pipe line was unwatered in 1908 for repairs to the valves and again in 1914 for a brief inspection. Conditions this year are then the result of 17 years use, and as such it might reasonably have been expected that the equipment would show noticeable evidence of wear and tear from use. The head gate cannot, of course, be completely closed except when the pipe is shut down, and although it is operated a short distance each week to make sure everything is in satisfactory working condition, there was no way of telling how it would close completely when required. The closing operation on this shut-down was perfect and the leakage through the gate not more than when it was first installed. The pipe line was found in equally good condition. A slight oxidation of the surface of the iron was to be noted, but there was no evidence of progressive rusting; in fact, in places the original mill scale was still quite apparent on the surface of the plates. Test holes cut through the concrete on the outside of the pipe showed that it was still in the same condition as when erected. There is no doubt that unless some unforeseen accident should occur this pipe line has a life fully equal to that of any other part of the plant.

Although no other noteworthy changes in equipment were made during the past year, a large number of improvements, unimportant in themselves, but on the whole tending towards more efficient and safer operation of the plant, were made. The usual high standards of maintenance have been kept up so that the condition of the plant at the end of this financial year leaves little to be desired.

There were no fatal accidents to employees during the year and only one serious accident, in which a workman met with a compound fracture of the arm.

COMBINED NORTHERN SYSTEMS

The most outstanding feature of the year's operation has been the general increase in load. The demand for power from the municipalities on the Eugenia, Severn and Wasdells systems increased in the majority of cases, as will be seen from the table of loads given in this section, and the demand of the combined systems during the fiscal year increased from 10,979 horsepower to 13,277 horsepower, an increase of 21 per cent.

This increase in load has taxed the Commission's generating plants to the limit of their capacity, and made it more difficult to take equipment out of service for repair or maintenance. Where such work would take out any equipment reducing the plant output, it has been necessary to carry out the work during light load periods and in many cases to purchase power.

Due to the low precipitation during the summer and fall months, the storage in the various lakes feeding the Severn river was depleted to a point where some anxiety was felt, the operators being faced with a reduced supply of water on the one hand and an increased demand for power on the other.

The Commission's engineers had foreseen the probable increase in power requirements and steps were taken early in the summer to conserve water for power development as much as possible. During low-load periods on the Severn and Wasdells systems considerable power was generated at the Big Chute and Wasdells plants, and transferred to the Eugenia system, thus utilizing water that would otherwise have been wasted over the dams and permitting water in the Eugenia storage basin to be conserved for use when loads were heavier, or in case of trouble at any plant. The importance of this arrangement lies in the fact that the water in the Eugenia basin is stored for development of power only, and is completely under the control of the Commission, so that water not required for power can be held until such time as it may be needed, whereas on the Severn river the question of navigation enters into the problem, water levels must be maintained and the regulation of the flow is outside of the Commission's control, although the Dominion government engineers in charge of stream flow and storage elevations on the Severn river have co-operated with the Commission's engineers to safeguard as far as possible the interest of power consumers.

In addition to conserving water by the above means, power was purchased from the Orillia Commission which had surplus capacity in its plant at Swift Rapids. Power was purchased from this plant during November, December, April, May, July, August, September and October. In August an arrangement was made with the Orillia Commission for the supply of a minimum of 800 horsepower. In order to assist the Commission in meeting peak loads and conserving water, the Orillia Water, Light and Power Commission has co-operated whenever possible by supplying power considerably in excess of the contract requirements.

By the above means the Commission's plants have been able to meet the remarkable increase in the demand for power, and to end the current fiscal year in a good position to meet the heavier demand of the winter. A study of load and water conditions shows that if these measures had not been adopted, both the Eugenia and Severn systems would have suffered a power shortage. The interconnection and operation of the Eugenia, Severn and Wasdells systems as a combined unit has proven this year not only mutually advantageous, but necessary if unrestricted service was to be given.

In reference to the advantages of combined operation, it may be added that in April and May, when one unit at the Big Chute was out of service for temporary repairs, and again in July and August when permanent repairs were being made, it would have been impossible to supply the demand of the Severn system municipalities from the Big Chute plant, but by means of the inter-connection between the systems, including the Swift Rapids plant, it was possible to carry all load without interruptions or restrictions.

SEVERN SYSTEM

The growth in the Severn System demand, which now exceeds the capacity of the generating plant, has kept the Big Chute plant heavily loaded. This has rendered it difficult to get equipment out of service long enough for extensive overhauling or repairs, but advantage has been taken of such opportunities as have occurred, and, on the whole, the plant has been maintained in good operating condition.

On April 30 the shaft broke in the 2,300 horsepower turbine, but fortunately the machine was brought to a stop before any other damage resulted. Temporary repairs were completed, and the unit put back into operation on May 12. During this period the capacity of the Big Chute plant was, of course, seriously reduced, but power was obtainable from the Eugenia plant, Wasdells plant, and from the Swift Rapids plant of the Orillia Commission, so that the Severn municipalities suffered no restrictions in their power supply. The breakage was shown to be due to a defect in the shaft, and the manufacturer supplied a new shaft without charge. Installation of this new shaft was commenced on July 14, and completed August 9, 1922. While the unit was shut down, arrangements were made for the supply of power similar to those made during the temporary repairs in May.

The outside of the penstocks and the gatehouse at this plant, also one of the operator's cottages, were given a coat of paint.

In September, 1922, a 22,000-volt double-circuit line was built to serve the Tiffin elevator of the Canadian National Railways at Midland, the new line tapping off the main transmission line south of Midland. A transformer station, stepping down from 22,000 volts to 550 volts, was built on the Railway property alongside the former steam plant. This customer's power requirements added materially to the system load.

Where the main transmission line from the Big Chute plant crosses Matchedash bay at Waubaushene, the steel towers and pole structures were given a coat of paint. This crossing includes three steel towers ranging from 90 feet to 180 feet high, and four wood-pole structures.

Owing to highway construction, it was necessary to alter our lines or move poles at several points during the year. In nearly all cases, sufficient notice of road work was received so that it was possible to make arrangements beforehand to avoid interruptions to service.

Sleet storms of February 22 and March 31, which were so severe in other parts of Ontario, were not so heavy in the Severn district and lines suffered no damage.

In order to ensure continuous telephone communication between operating headquarters at Waubaushene and the Big Chute plant, the No. 6 copper-clad steel telephone conductor at the Waubaushene crossing was taken down in the latter part of February, and replaced with a $\frac{1}{4}$ inch seven-strand steel cable. The No. 6 wire had proven too weak on the long spans under ice and sleet

conditions, and was liable to cause extended interruptions to service by involving the power conductors, which are difficult to repair on these high, long spans.

The work of restringing, re-insulating and replacing cross-arms and poles where necessary, on the "A" circuit between Big Chute and Waubauskene, was completed early in this fiscal year. Larger conductors were put up, which facilitates operation and maintenance by allowing the load to be carried by the new circuit alone, so that the second circuit can be taken out of service for repairs. Previously this was not always possible. The wooden pole structures crossing the Black river and some of the long swamp spans were rebuilt to a new design to give more clearance and strength and the locations were changed somewhat so as to be more accessible for patrol and maintenance.

SEVERN SYSTEM—LOADS OF MUNICIPALITIES, 1920 TO 1922

Municipality	Peak load in horsepower			Change in load, 1921-1922	
	Oct., 1920	Oct., 1921	Oct., 1922	Decrease	Increase
Alliston.....	132.7	143.0	119.0	24.0	....
Barrie.....	750.6	828.4	1,057.6	....	229.2
Beeton.....	89.0	86.4	89.6	....	3.2
Bradford.....	52.2	69.4	70.6	....	1.2
Camp Borden.....	139.4	234.5	234.5	....	....
Coldwater.....	49.5	56.3	108.5	....	52.2
Collingwood.....	1,286.8	811.0	1,161.0	....	350.0
Cookstown.....	55.0	75.0	36.0	39.0	....
Creemore.....	45.8	45.8	56.3	....	10.5
Elmvale.....	111.2	124.6	136.7	....	12.1
Midland.....	1,362.0	1,108.5	1,583.0	....	474.5
Penetang.....	900.8	504.0	811.0	....	307.0
Port McNicol.....	36.0	44.7	49.5	....	4.8
Stayner.....	184.0	120.6	112.6	8.0	....
Thornton.....	12.0	14.3	14.0	0.3	....
Tottenham.....	31.2	38.2	35.3	2.9	....
Victoria Harbour.....	48.2	46.0	47.0	....	1.0
Waubauskene.....	26.1	24.0	26.5	....	2.5

EUGENIA SYSTEM

The power demand of the Eugenia System municipalities has increased during the year, the growth being more marked during the last months.

In November, 1921, taking advantage of the low load period over the Thanksgiving holiday, repairs to the pipe line at Eugenia were carried out. Arrangements were made for the transfer of power from the Severn and Wasdells systems and from the Swift Rapids plant, and the municipalities were asked to restrict their motor load, Owen Sound operating its steam plant for the same purpose. As most power customers shut down for the holiday, this caused little inconvenience, and no restrictions were placed on the lighting load. The Eugenia plant was closed down at midnight on Saturday, and repairs

rushed through by night and day work so that the plant was again available to meet power requirements Tuesday morning. About 100 feet of the wood-stave pipe line, where it passed through an earth fill, had deteriorated, and this was repaired by building in a new section. The remainder of the pipe line was found to be in fair condition and required only minor repairs, such as placing extra bands and plates here and there where stave ends had sprung, and replacing a few staves at several points. The expansion joint in the steel pipe section just below the surge tank was examined and the packing replaced, reducing leakage at this point.

Advantage was taken of the load condition during the spring months to make some further improvements in the design of No. 1 turbine in the Eugenia plant, and a further increase in efficiency resulted. These changes were completed in June and the unit put back into service. The machine has since operated very satisfactorily, requiring less water for the same power output, thus assisting in conserving the water supply, a matter of increasing importance due to the growth of load.

Various minor adjustments and repairs were made at the plant, the surge tank and supporting structure were painted, and the power house and equipment generally maintained in a condition of high efficiency.

At Hanover an outdoor type switching station was constructed and put into operation on January 8, necessary alterations being made in the lines to connect them into the new structure, the line running north to Elmwood and Chesley being brought back three-quarters of a mile for this purpose. This switching station was required to give proper operating control of the lines to the Bruce County extension and to Elmwood and Chesley, and to permit service being given from either of the two supply lines at this point. Three electrically operated, 300-ampere, oil circuit-breakers were installed, together with relays, so that in case of trouble developing on lines beyond Hanover, the defective section will be cut out automatically without interrupting service to other sections and customers.

The Hanover distributing station was extended to accommodate the low-tension switchboards and the local commission's condenser, the high-tension equipment remaining in the old section of the building. The entrance structure was remodelled, and the Hanover local line and the Neustadt feeder re-arranged, and brought into the new section of the station.

An operator has been located permanently at Hanover to look after the Hanover transformer station, to operate the condenser of the local commission, and to do any necessary switching at the Hanover switching station. This has greatly facilitated the operation of the lines in this section.

At Durham a new substation was erected and put into operation on April 30, to serve the John E. Russell Company. This is an out-door, pole-type transformer station with three 100-kv-a., 22,500/550-volt transformers. This station is connected into the Durham-Mount Forest line at pole No. 1,007 in Durham.

On the morning of July 11, about 3 a.m., the out-door, pole-type station at Elmwood was destroyed by fire, which had its origin in a garage adjacent to the station. Fortunately the power transformer was not damaged. Service was restored in the evening of the same day by means of temporary connections. The pole structure was rebuilt and new equipment installed as soon as delivery of material could be obtained.

Additional telephone protective equipment was installed at Hanover and Mount Forest.

At Kincardine the size of the high-tension fuse was increased and the current transformers on the low-tension relays were altered to give more selective operation.

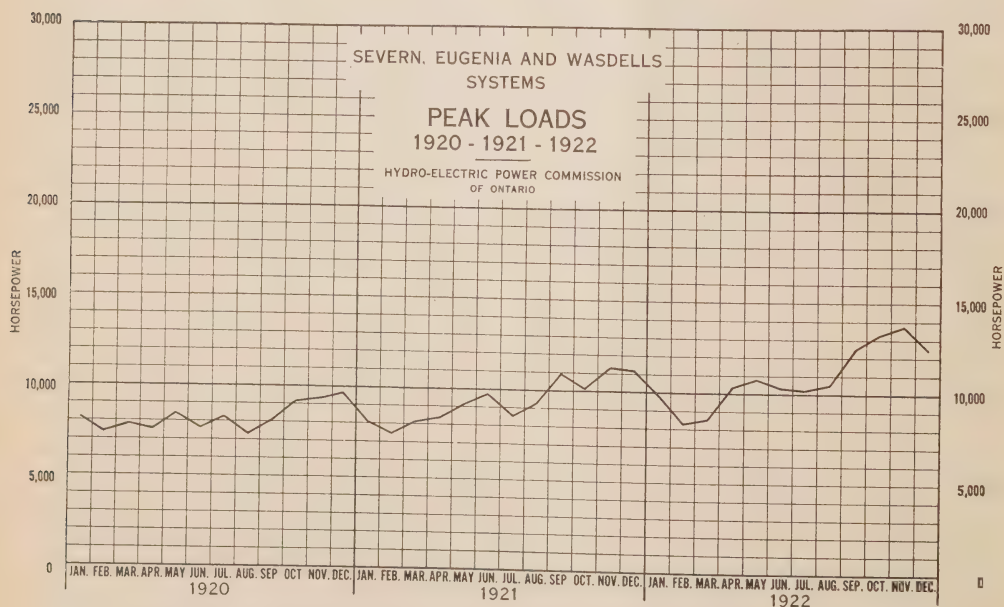
Structures at points where transmission lines cross over railway were inspected, and side guys installed generally throughout the system.

A rural line was built out of Walkerton Quarry substation, supplying consumers in the Walkerton rural power district. This work was done by the Operating Department maintenance staff, and line was put into service on February 15, being operated by this department.

The Flesherton rural power system was built by the Construction Department and turned over to the Operating Department for operation on March 24, 1922.

Owing to the programme of provincial highway construction, it was necessary to make extensive alterations to the lines on the Eugenia system. In some cases blasting under or near the Commission lines resulted in damage to the lines and equipment and serious interruptions to customers. Considerable trouble was experienced in this respect on the line running north to Owen Sound, and at one point on this line, where the roadway ran through a rock cutting, it was necessary for us to remove our lines from the highway for a distance of about 1,100 feet, in order to avoid a continuation of the numerous interruptions due to blasting. On the road north of Markdale, which was reconstructed more than a year ago, the settling of the earth has caused poles to go over and has rendered necessary constant inspection and considerable work to maintain it in a safe and satisfactory operating condition. A somewhat similar condition exists on the road between Durham and Mount Forest.

The sleet storm of February 22, which was so severe further south, did practically no damage to the lines on the Eugenia system. The same is true of the sleet storm of March 31, 1922.



EUGENIA SYSTEM—LOADS OF MUNICIPALITIES, 1920 TO 1922

Municipality	Peak load in horsepower			Change in load, 1921-1922	
	Oct., 1920	Oct., 1921	Oct., 1922	Decrease	Increase
Arthur.....	126.0	121.0	100.5	20.5	....
Carlsruhe and Neustadt.....	104.5	170.2	167.5	2.7	....
Chatsworth.....	28.6	24.0	52.8	....	28.8
Chesley.....	247.0	263.2	268.8	....	5.6
Dundalk.....	104.5	87.0	109.3	....	22.3
Durham.....	130.0	512.0	573.7	....	61.7
Elmwood.....	58.0	45.5	29.6	15.9	....
Flesherton.....	55.4	47.5	36.2	11.3	....
Grand Valley.....	63.6	65.0	65.0	....	....
Hanover.....	727.8	1,441.0	1,675.7	....	234.7
Holstein.....	9.6	9.6	8.0	1.6	....
Hornings Mills.....	5.0	5.0	5.0	....	....
Kincardine.....	....	114.0	179.6	....	65.6
Lucknow.....	....	85.7	87.0	....	1.3
Markdale.....	90.6	88.4	92.4	....	4.0
Mount Forest.....	192.7	156.4	205.8	....	49.4
Orangeville.....	144.5	167.5	194.6	....	27.1
Owen Sound.....	1,340.0	1,402.0	1,691.7	....	289.7
Priceville.....	....	10.7	10.4	0.3	....
Ripley.....	....	49.5	77.7	....	28.2
Shelburne.....	162.2	136.7	147.4	....	10.7
Tara.....	53.6	53.6	42.8	10.8	....
Teeswater.....	....	102.1	67.6	34.5	....
Wingham.....	....	382.0	297.5	84.5	....

WASDELLS SYSTEM

The load for the Wasdells system at the end of the fiscal year showed a considerable increase over the same month last year. This was, in great part, due to an extension of the system transmission line to supply the new municipalities of Port Perry and Uxbridge. Due to the power requirements of the Severn and Eugenia systems, and in order to conserve water wherever possible, as well as because of the increased load of the Wasdells system, the generating station at Wasdells Falls has been kept heavily loaded.

The shaft in No. 2 generator at Wasdells, which had broken and been repaired some years previously, was replaced by a new shaft, as the shaft again failed, making it practically impossible to effect satisfactory repair. At the time of the first break, a new shaft was ordered and had been delivered and held at the plant for some time in order to make the replacement when a suitable opportunity occurred. This work was carried out in March, 1922.

No. 1 unit at this plant is also operating with a repaired shaft, but a new shaft of somewhat stronger design has been ordered and recently delivered, as it is intended to replace the shaft at an early date. A new thrust bearing has also been designed and supplied for this unit, and will be installed at the time the new shaft is put in. It is believed that this will avoid further trouble with shafts breaking.

The metering equipment at the power house was re-arranged and additional meters installed in order to get more complete records of the power generated and distributed to the system or tie line.

An investigation was made into the question of flooding certain lands above the power house, and it was shown that this was due, to a great extent, to narrow sections in the river, and not to the operation of the power house. An agreement was reached with the farmers on the lands affected, fixing the level to be maintained in the head water at the Wasdells plant.

The usual details of maintenance were carried out through the year to maintain the equipment in the power house and substations in proper operating condition, and lines were constantly patrolled in order to detect and replace any insulators, cross-arms, etc., likely to cause trouble.

A 22,000-volt single circuit line of 5/16 inch steel cable was constructed from Cannington to Greenbank station. A 3-phase transformer of 150-kv-a. capacity was installed at this station, stepping down from 22,000 volts to 4,000 volts. A feeder at 4,000 volts runs from this station to Junction W761, a distance of $1\frac{3}{4}$ miles, where it branches, one line running $4\frac{3}{4}$ miles to Port Perry and the other 4 miles to Uxbridge. Station and lines were made alive and service first given to the municipalities on September 29, 1922.

WASDELLS SYSTEM—LOADS OF MUNICIPALITIES, 1920 TO 1922

Municipality	Peak load in horsepower			Change in load, 1921-1922	
	Oct., 1920	Oct., 1921	Oct., 1922	Decrease	Increase
Beaverton.....	88.4	103.2	119.9	....	16.7
Brechin.....	81.0	58.4	53.6	4.8	....
Cannington.....	101.8	72.3	92.5	....	20.2
Kirkfield.....	15.6	17.4	32.7	....	15.3
Sunderland.....	75.5	67.0	60.3	6.7	....
Woodville.....	89.5	80.4	61.0	19.4	....

WASDELLS SYSTEM—NEW MUNICIPALITIES

Municipality	Date connected	Load in horsepower		Increase in horsepower
		Initial	Oct., 1922	
Port Perry.....	Sept. 29, 1922	80.4	80.4	....
Uxbridge.....	Sept. 29, 1922	88.4	88.4	....

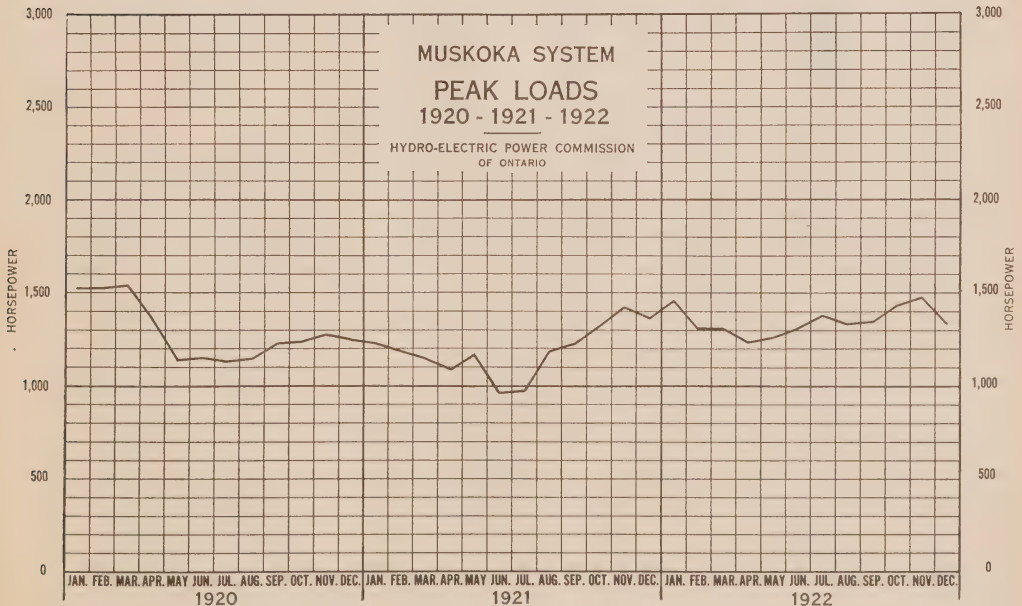
MUSKOKA SYSTEM

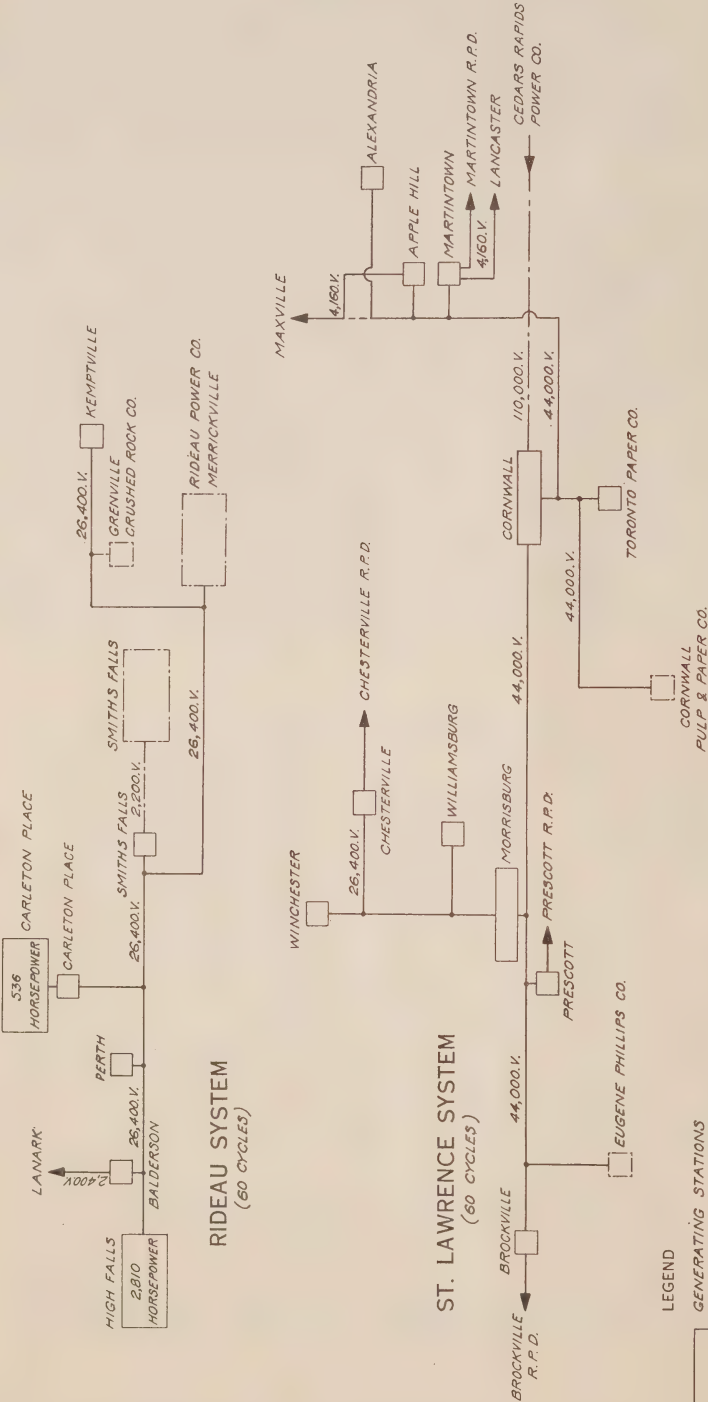
The generating station at South Falls has been taxed to its capacity during the past year. There has been some increase in the peak load demand of the Muskoka system municipalities, and they have also raised their load factor, so that the total kilowatt-hours required from the South Falls plant during 1922 as compared with 1921 shows a growth in the average load of approximately 14 per cent.

The increase in the load has made it even more difficult than formerly to carry out maintenance work on the generators, turbines and other equipment. There are only short periods during which the load can be carried by one generator, permitting the other to be closed down for inspection or repairs.

On April 26, the shaft extension on No. 2 unit broke off. Work on a new shaft extension was rushed through and the unit was repaired and put back into service on April 28. During the interval, both Gravenhurst and Huntsville loads were restricted to the putput of No. 1 generator. To avoid a repetition of the same trouble, a new shaft extension was made up of nickel steel and installed. This work was carried out between Saturday night of June 30, and Tuesday morning, July 3, the load requirements of the municipalities being light over Sunday and Dominion Day.

Some trouble has been experienced at different times during the year due to armature coils burning out in No. 1 generator. Repairs were in all cases rushed through without delay, a quantity of spare coils being kept on hand.

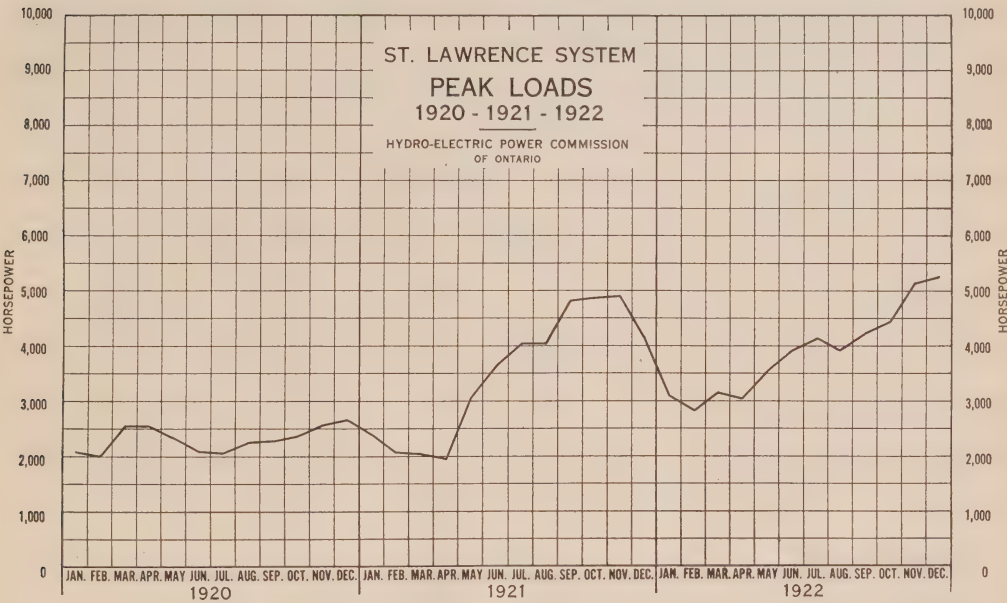




ST. LAWRENCE AND RIDEAU SYSTEMS
(60 CYCLES)
DIAGRAM OF STATIONS
AS AT OCTOBER 31, 1922
HYDRO-ELECTRIC POWER COMMISSION
OF ONTARIO

MUSKOKA SYSTEM—LOADS OF MUNICIPALITIES, 1920 TO 1922

Municipality	Peak load in horsepower			Change in load, 1921-1922	
	Oct., 1920	Oct., 1921	Oct., 1922	Decrease	Increase
Gravenhurst.....	611.0	341.8	384.7	....	42.9
Huntsville.....	655.5	872.6	921.0	....	48.4



ST. LAWRENCE SYSTEM

Had the voltage of the St. Lawrence system not been raised to 44,000 volts, the operation throughout the present fiscal year would have been practically uneventful. However, in order to supply power to the Eugene Phillips Company, located at Brockville, the transmission voltage of the system had to be raised, and for economic reasons, 44,000 volts was selected.

This, of course, necessitated changes in the old transmission lines and old stations, the changes at Prescott being the most drastic. This station was practically rebuilt, using a new 300-kv-a., out-door type transformer. Such changes were not necessary in the lines and stations of more recent construction, as provision had been made for this eventuality.

The system has been operating since October 1, with two high-tension voltages, since a small section from Morrisburg to Winchester and Chesterville is still served at 25,400 volts, while 44,000 volts is used elsewhere. This small section was left undisturbed in order to avoid the expense of reinsulating the lines and making the necessary station changes. A 300-kv-a., 44,000/25,400-volt transformer, installed at Morrisburg, serves to supply the required power, while air-break switches located at the same point serve to sectionalize the high-tension lines.

Owing to the fact that the high-tension transformers at Cornwall are

"Y"-connected on the 110,000-volt side, the neutral could not be grounded at Cornwall without creating inductive interference, injurious to the Bell Telephone Company. Various schemes for stabilizing the neutral without the objectionable telephone interference were tried, and numerous tests with oscillographic records were made. The transformers were left operating with the neutral of the service bank connected to the neutral of the high-tension bank, thus utilizing the service bank as a sort of tertiary winding. In this way the system has operated in a satisfactory manner.

It might be added that the new station at Brockville which serves and is owned by the Eugene Phillips Company, was made alive on October 25, 1922, just prior to the close of the fiscal year.

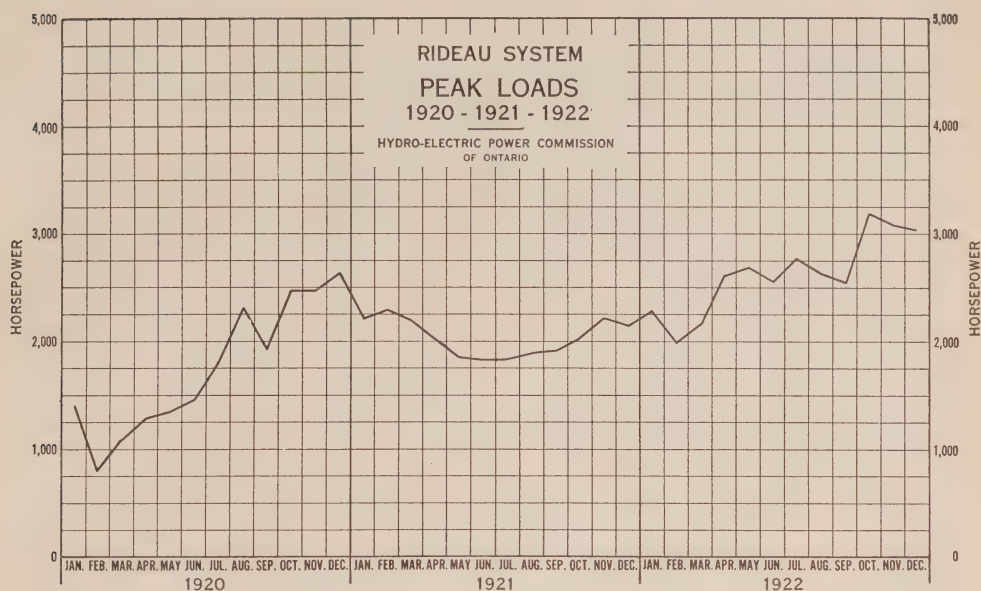
ST. LAWRENCE SYSTEM—LOADS OF MUNICIPALITIES, 1920 TO 1922

Municipality	Peak load in horsepower			Change in load, 1921-1922	
	Oct., 1920	Oct., 1921	Oct., 1922	Decrease	Increase
Alexandria.....	....	136.2	183.0	....	46.7
Apple Hill.....	....	18.7	24.0	....	5.3
Brockville.....	1,048.0	1,038.8	1,233.2	....	194.4
Chesterville.....	130.0	132.0	124.7	7.3	....
Cornwall Pulp & Paper Co.....	....	1,880.7	....	....	....
Howard Smith Paper Co.....	725.0	1,415.2	2,443.0	....	1,017.7
Lancaster.....	....	22.7	24.0	....	1.3
Martintown.....	....	11.6	12.4	....	0.8
Maxville.....	....	34.8	34.8	....	....
Prescott.....	220.0	223.8	147.4	76.4	....
Williamsburg.....	17.6	13.4	18.0	....	4.6
Winchester.....	96.0	90.4	110.0	....	19.6

RIDEAU SYSTEM

Of the Rideau system there is little to be said. From an operating point of view the Grenville Crushed Rock Company at Deeks, which was connected to the system on March 1, 1922, has given some trouble in the way of voltage regulation. This station was constructed by the customer to supply a load of considerable magnitude which, as is usual with rock crushing plants, was both variable and abrupt in its variations. As a result, the regulating equipment at High Falls failed to control satisfactorily the system voltage. The trouble was corrected by making minor additions and adjustments to the equipment, which is now satisfactory in every respect.

The new station supplying the village of Kemptville was put in operation on November 28, 1921, and has since been operating without incident. This station is connected to the system by a 26,400 line from Merrickville, 12.1 miles in length, and since the load requirements are light it can be supplied from Merrickville station in case of trouble on the Smiths Falls-Merrickville line. This, of course, is an advantage.

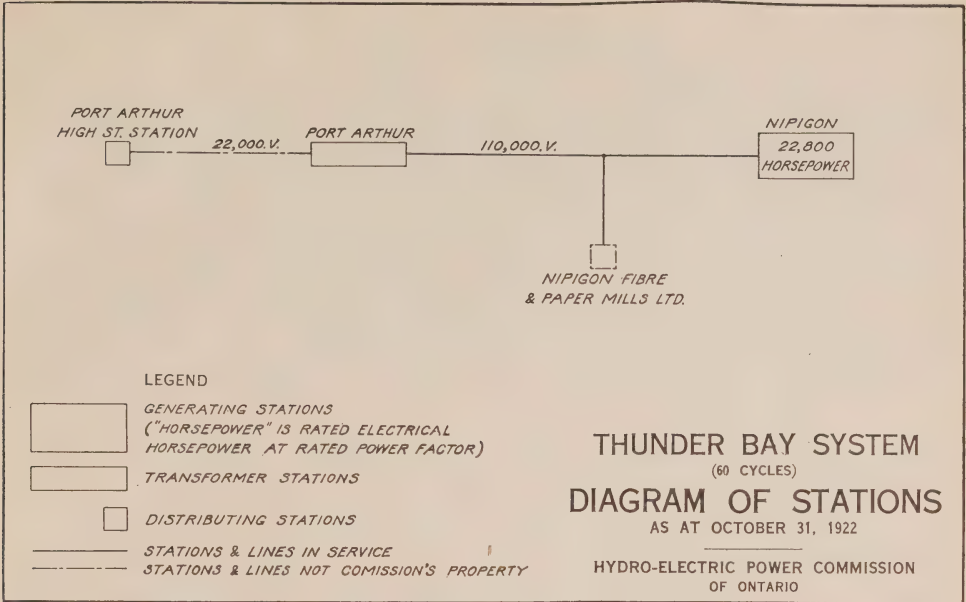


RIDEAU SYSTEM—LOADS OF MUNICIPALITIES, 1920 TO 1922

Municipality	Peak load in horsepower			Change in load, 1921-1922	
	Oct., 1920	Oct., 1921	Oct., 1922	Decrease	Increase
Carleton Place.....	694.0	769.4	800.2	....	30.8
Lanark.....	....	38.8	35.5	3.3	....
Perth.....	558.0	522.7	474.5	48.2	....
Smiths Falls.....	1,052.0	713.0	785.5	....	72.5

RIDEAU SYSTEM—NEW MUNICIPALITIES

Municipality	Date connected	Load in horsepower		Increase in horse power
		Initial	Oct., 1922	
Kemptville.....	Nov. 28, 1922	117.9	128.7	10.8



THUNDER BAY SYSTEM

The Cameron Falls plant has now completed its second year of operation with steadily increasing load. There were no radical changes on the Thunder Bay system during the past year.

Due to the closing down of the Nipigon Fibre Company just before the beginning of the fiscal year, the load decreased for some months, but a rapid increase has been evident since that time, and the load is now attaining a value where both generators are necessary to carry the load.

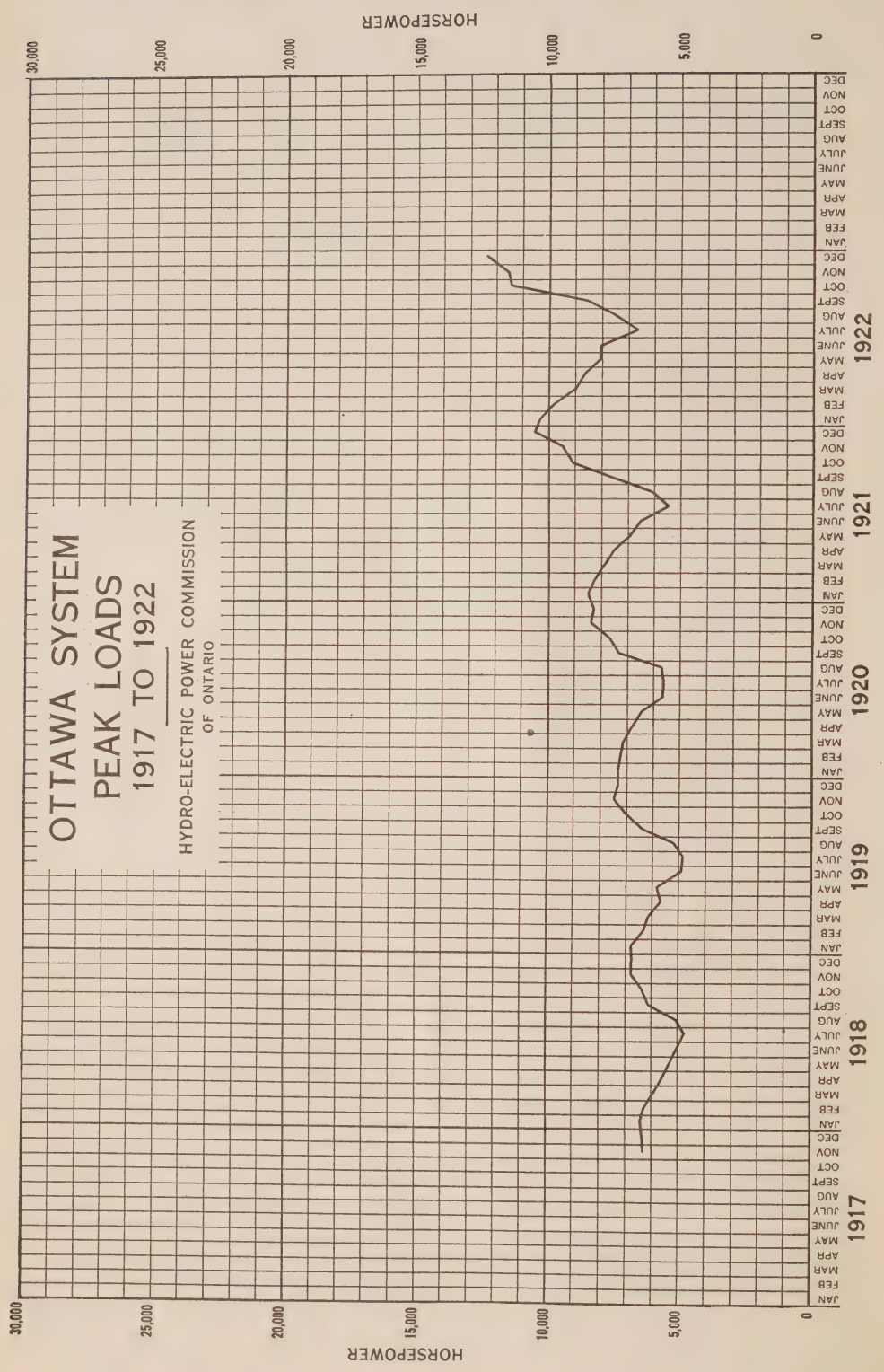
All equipment at the generating station came through the year in good condition. Besides the usual repair work on auxiliary equipment, the turbine bearing on No. 2 unit was replaced. The units of the main power transformer bank have now been painted and placed in permanent locations.

No trouble has been experienced with the transmission line so far. Weather conditions in the main have been favourable, although late last winter a severe sleet storm visited the Port Arthur district. While a great deal of damage was done by this storm to the local and other distribution systems, the Commission's line stood up under the strain and we experienced no trouble whatever.

At the receiving station at Bare Point some work was done on the power transformers and the metering equipment. The power transformer tanks required attention due to oil leaks, and these have been repaired and the units painted. The metering equipment was altered slightly with a view to obtaining more satisfactory records.

Some slight changes were made in the Port Arthur distributing station. These consisted in alterations to the metering equipment for better records, and in the protective equipment with a view to giving the best service by isolating trouble to its own feeder wherever possible. A section of the station near switchboard has been partitioned off as an office for the operators, for the greater safety of the operators and to reduce cost of heating.

The increase in load on this system is shown by the curve given elsewhere in this report and indicates an encouraging growth in the amount of power utilized in this district.



OTTAWA SYSTEM

The only change in operating conditions on the Ottawa system has been the addition of the Nepean Rural district, the line to which was first made alive on February 23, 1922. This line is connected to the distributing lines of the Ottawa Hydro-Electric Commission under arrangements with that Commission. The total supply of power for the Ottawa system is obtained from the Ottawa and Hull Power and Manufacturing Company under a contract between that Company and the Hydro-Electric Power Commission of Ontario. The delivery of power has been very reliable and satisfactory.

The load of the Ottawa Hydro-Electric Commission, as will be seen from the accompanying graph, has continued to increase in a gratifying manner.

CENTRAL ONTARIO AND TRENT SYSTEM*

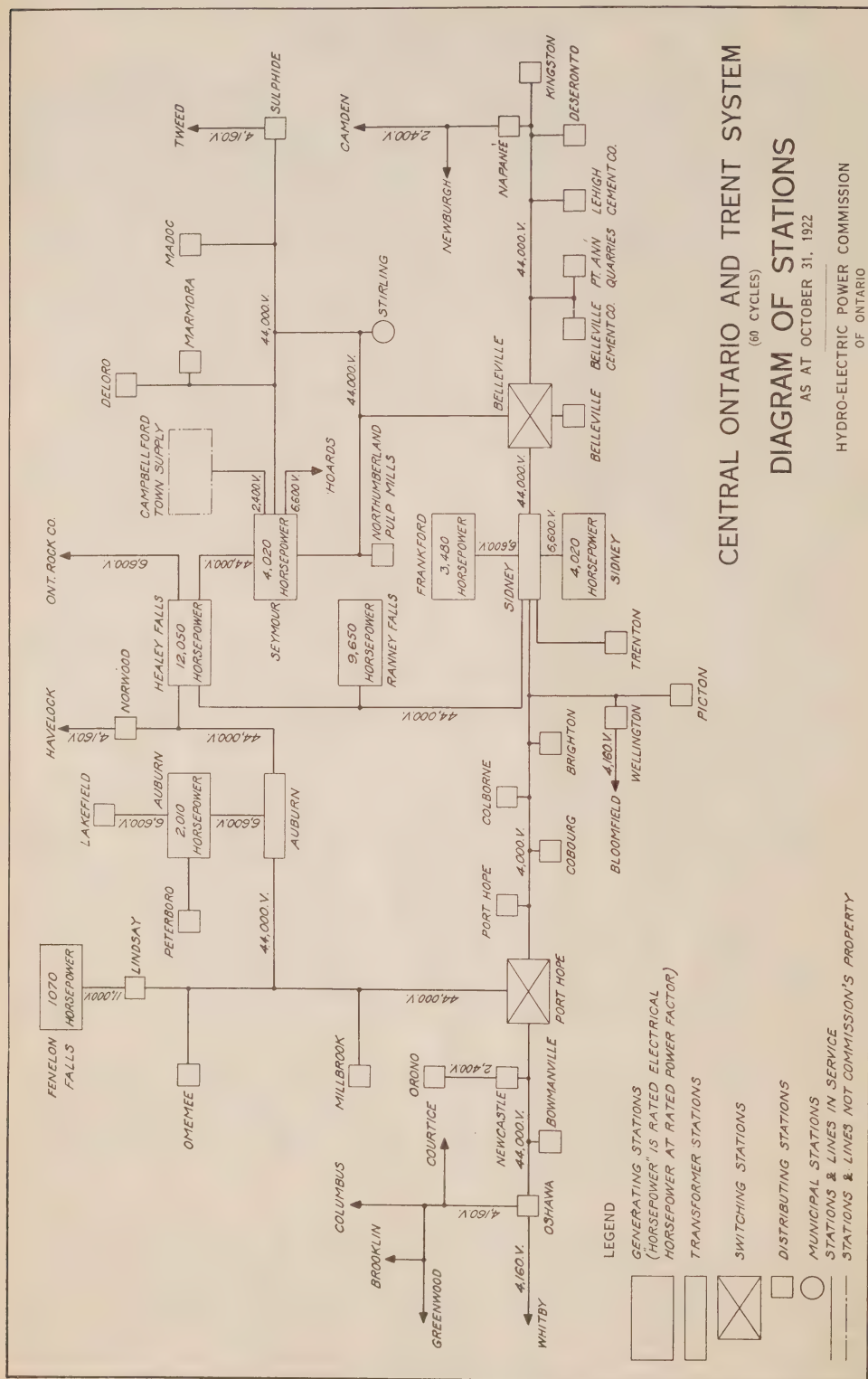
A noteworthy addition to the generating equipment of the Central Ontario and Trent system occurred during the month of August, 1922, when the first unit of the new Ranney Falls generating station was placed in operation. The plant consists of two 4,500-kv-a. units, one of which was put into service with certain load limitations pending the completion of the work. On September 2, the second generator became available and with the second transformer the entire plant became available on September 18, 1922.

It is interesting to note that the plant is designed to operate with increased output while the canal is closed to navigation. The nominal electrical capacity during the navigation season, of 7,200 kilowatts, or 9,650 horsepower, becomes, with an eight-foot reduction of the reach above dam No. 9 and the corresponding increase in operating head at dam No. 10, approximately 8,400 kilowatts, or 11,300 horsepower.

A large percentage of the valuable power sites of the Trent and Otonabee rivers occurs in the neighbourhood of Campbellford. Dams 11, 12 and 14 are already developed, consequently Ranney Falls (dam No. 10) is close to a number of existing transmission lines. This is to some extent an operating convenience as it provides a number of outlets for the power, diminishing the possibility of the station being cut off from the high-tension transmission system. A double circuit section, 0.38 miles in length, loops the Healey Falls-Trenton line into the station, which enables the operators to sectionalize this line, and in case of trouble on one section, to deliver power over the other. Ultimately another connection will be made from Ranney Falls to the Campbellford-Belleville line.

These numerous connections have the advantage of great operating flexibility in the matter of transmission, but the concentration of so large a percentage of the system power between Healey Falls and Trenton necessitates heavier transmission lines in all directions than would be the case if the plants were spread out nearer the various load centres.

* The Central Ontario system and the Trent system both receive their electrical energy from the same sources of power supply through the same main transmission network and from the standpoint of power development and electrical operation are regarded as a unit and known as the Central Ontario and Trent system. It may be explained that after the Central Ontario system was purchased by the provincial Government, a number of municipalities in central Ontario, from time to time, applied to the Hydro-Electric Power Commission for power to be supplied under the provisions of the Power Commission Act. The municipalities in central Ontario which thus enter into direct relationship with the Hydro-Electric Power Commission are for purposes of financial administration grouped in what is termed the "Trent system."



As a result of the re-insulation work carried out during 1919 and 1920, a very high grade of service has been obtained from the transmission lines at comparatively small expense. Insulator failures are almost unknown and interruptions from other causes have been satisfactorily dealt with. It is now safe to say that the reduction in the number of patrolmen as described in the Annual Report for 1921 was fully justified from the viewpoint of service as well as economy.

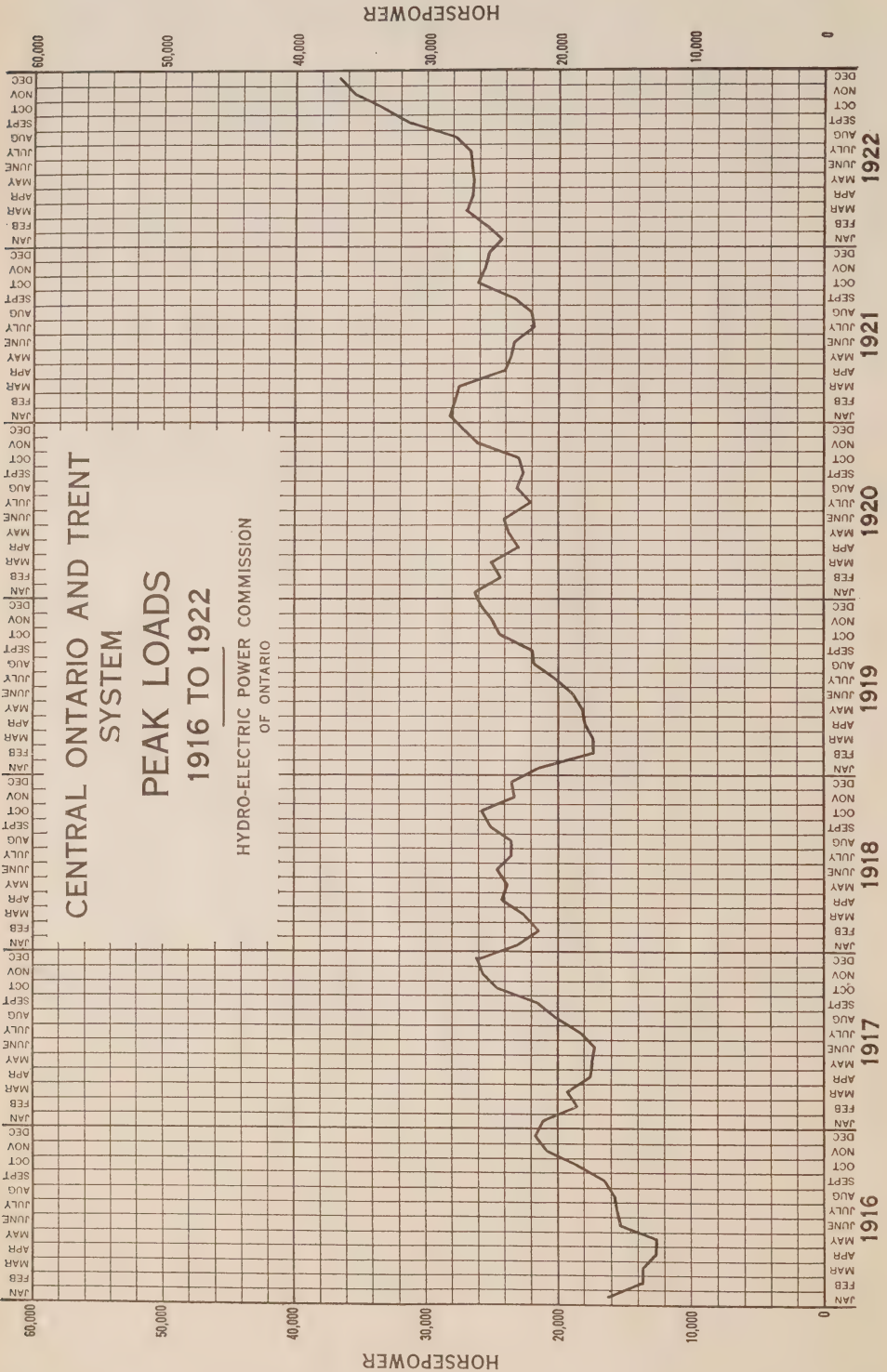
It is gratifying to report that high-tension line surges have been reduced through grounding the system neutral at the star point of the three-phase transformers at Healey Falls. Equipment has also been provided, making it possible to ground the neutral at the Sidney Terminal station in case the system should be sectionalized so that Healey Falls and Trenton are supplying different sections. It is standard operating practice to keep all high-tension lines in parallel and the neutral grounded at only one point, usually Healey Falls.

To improve the relay operation and to provide a relay system workable with a grounded neutral transmission system, a thorough revision of the relays throughout the entire 44,000-volt system was made. Although the operation of these relays depends to a large extent upon suitable settings, which requires a certain amount of time and experience, it can be definitely said that the reverse power and ground relays, which previously were not in general use, make it possible automatically to isolate sections of lines on which trouble occurs, with very little, if any, disturbance to the rest of the system.

As a result of the combination of the new relay scheme and the grounded neutral, disturbances which previously would have created surges, spreading over large and unexpected sections of the system, are now localized.

On the initiative of the Peterboro Civic Utilities, an improvement has been effected in the line facilities for utilizing, when required, the surplus power of the Peterboro Hydraulic Power Company. Formerly this power was fed directly into one or two circuits of the Peterboro distributing system, which imposed undesirable limitations as to the quantity of power which could be taken at various times. Now the Quaker Oats Company has set aside one of its lines from the Peterboro Hydraulic Power Company to its factory, and the Civic Utilities has provided a line from the factory to the Peterboro substation, which enables the Commission to deliver the power to the 2,400-volt bus and meter it at the station. The Commission provided protective equipment at the Peterboro Hydraulic Power Company.

At the request of the Canada Cement Company, one of the 750-kv-a., 44,000-volt transformers was removed from the Belleville Cement Mill to the Lehigh station, where it is more likely to be required. The connections for the transformer have not yet been completed.



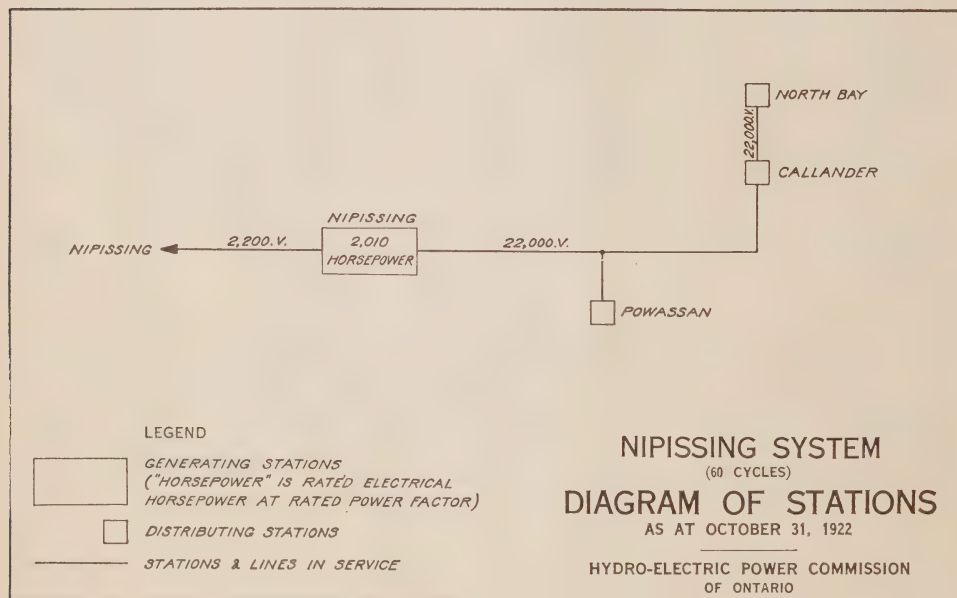
**CENTRAL ONTARIO AND TRENT SYSTEM—LOADS OF MUNICIPALITIES,
1920 TO 1922**

Municipality	Peak load in horsepower			Change in load, 1921-1922	
	Oct., 1920	Oct., 1921	Oct., 1922	Decrease	Increase
Belleville.....	1,689.0	1,943.7	2,624.8	....	681.1
Bloomfield.....	54.0	22.7	35.0	....	12.3
Bowmanville.....	1,206.0	1,119.3	1,285.0	....	165.7
Brighton.....	122.0	97.3	174.2	....	76.9
Brooklin Rural.....	134.0	98.5	82.4	16.1	....
Cobourg.....	804.0	970.0	1,059.0	....	88.5
Colborne.....	109.0	109.3	126.5	....	17.2
Deseronto.....	302.0	250.6	287.0	....	36.4
Havelock.....	....	71.4	69.8	....	1.6
Kingston.....	1,707.0	2,506.7	2,547.0	....	40.3
Lakefield.....	161.0	156.8	85.0	71.8	....
Lindsay.....	1,158.0	1,375.3	1,260.0	115.3	....
Madoc.....	131.0	143.4	152.0	....	8.6
Marmora.....	....	49.5	49.4	0.1	....
Millbrook.....	34.0	40.7	36.4	4.3	....
Napanee.....	374.0	565.6	576.4	....	10.8
Newburg.....	273.0	386.0	160.8	225.2	....
Newcastle.....	37.0	48.2	59.0	....	10.8
Norwood.....	....	37.5	101.3	....	63.8
Omeme.....	40.0	90.3	58.0	32.3	....
Orono.....	37.0	48.2	40.0	8.2	....
Oshawa.....	3,307.0	3,493.2	3,850.0	....	356.8
Peterborough.....	3,950.0	4,886.0	4,306.2	579.8	....
Picton.....	295.0	268.0	326.0	....	58.0
Port Hope.....	405.0	575.0	608.0	....	33.0
Stirling.....	134.0	107.2	135.3	....	28.1
Trenton.....	593.0	671.5	823.0	....	151.5
Tweed.....	92.0	106.5	144.7	....	38.2
Wellington.....	87.0	63.0	74.0	....	11.0
Whitby.....	424.0	509.3	583.0	....	73.7

PROBLEM OF WATER SHORTAGE

The Central Ontario and Trent system, as is well known, is entirely dependent for power upon generating stations situated on the Trent and Otonabee rivers,—waters which are navigable. These generating stations are now the property of the province of Ontario and are operated in trust by the Hydro-Electric Power Commission of Ontario. The interest of navigation and all matters respecting the regulation of stream flow are under the jurisdiction of the Federal Government. The interests of both navigation and power are affected by the manner in which the Trent and Otonabee waters are regulated. Navigation is chiefly concerned with the maintenance of certain levels, while power is more especially interested in the maintenance of a uniform stream flow.

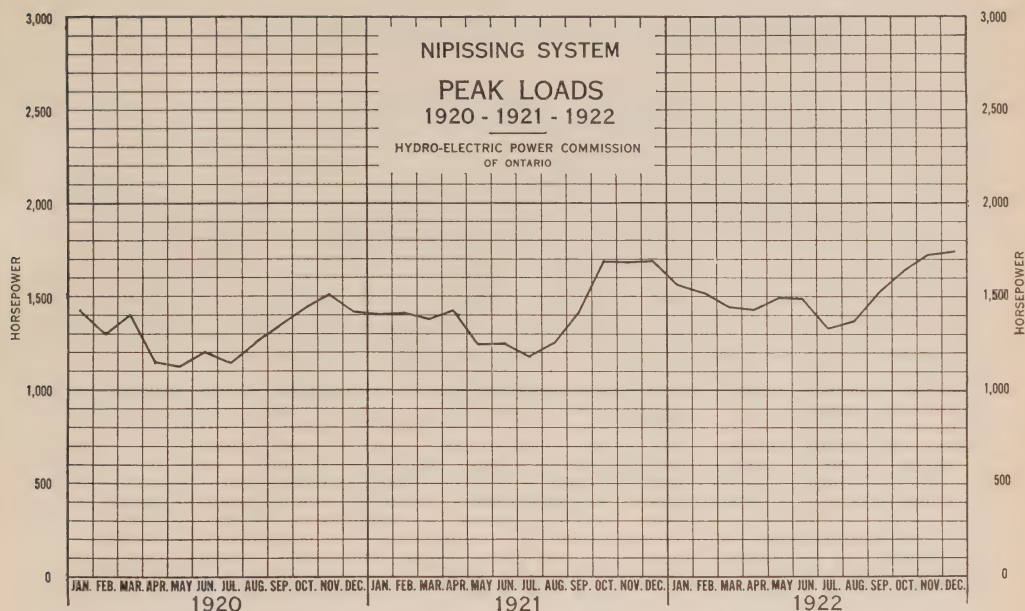
At times, insufficient stream flow has created serious power shortages which, it is contended, could have been avoided without in any manner causing injury to navigation interests. In 1922, a very serious shortage occurred. The Hydro-Electric Power Commission of Ontario has had technical officers make a careful study of the conditions which resulted in this shortage with a view to ascertaining what form of flow regulation could advantageously be adopted in order to avoid, so far as possible, similar shortages in the future. The various data and studies of the Commission's engineers are being assembled in the form of a Report, which, if ready before the Fifteenth Annual Report goes to press, will be included as Appendix No. 3.



NIPISSING SYSTEM

The Nipissing power house has been operated very close to its maximum capacity as regards both generating equipment and water supply. Constant attention has been necessary to maintain equipment in continuous and efficient operating condition and to conserve water as far as possible.

The storage of water in various areas, made possible by the dams put in



during 1920, has been essential to the operation of the system. Rangers have been employed throughout the year to look after these dams, doing such minor maintenance as necessary, and operating the stop logs to store or release water as required. Two rangers' shanties have been constructed in the bush for their accommodation while at outlying points.

Braie Lake storage dam was blown up with dynamite by some unknown party on August 6 or 7, 1922. The person responsible for this damage has not yet been discovered, and there is no apparent motive for the outrage. The loss of the water stored on this lake made it necessary to drain the storage areas further back, and in view of the abnormally dry summer and autumn, this depletion of storage areas is a matter of serious importance. The dry season has also reduced the natural autumn storage and stream flow, lowering the possible output of the power house.

The power house and equipment generally have been maintained in good operating condition. The Lombard governor cylinders were re-bored and re-ground, and fitted with larger pistons to give more efficient governor operation. Protective screens were installed around the lightning arresters to avoid danger of operators coming in contact with live parts. On the main dam above the power house a hand railing was installed for the safety of the operators.

On April 7, lightning struck the North Bay auxiliary steam plant, setting fire to the building. The fire was extinguished without serious damage to the building, but the 150-kw. generator was badly burned and had to be returned to the manufacturers for repair. The 300-kw. generator was damaged by water, but repairs were made and coils dried out without removing machine from the plant. The manufacturers put in a new winding in the 150-kw. generator, and same was returned to North Bay and reinstalled in the steam plant in October. Loss was covered by insurance.

At Callander substation an additional 25-kv-a., 22,000-volt, single-phase transformer was installed, connected in open delta to operate with the transformer previously installed. All equipment in the station was grounded.

OPERATING DEPARTMENT METER SECTION

The work of this section of the operating department has been carried on in the usual way during the past year in checking, calibrating and maintaining in adjustment all the metering equipment used by the Commission for billing purposes. This equipment is calibrated periodically, and in case of damage is repaired and replaced in service as soon as possible.

The protective devices on feeders, transformer banks and high-tension lines have been maintained in the best possible condition, and in most cases trouble is now isolated in its own location instead of involving other sections.

The services of the Operating Department meter repair shop have been used for repairing and rewinding instrument transformers and rebuilding meters. This work is taken care of in emergency at minimum expense. Some special work in adjustment of voltage transformers for accurate ratio has also been done.

A number of tests of various sorts have been made for municipalities requesting them, the engineers of this department, with the necessary equipment, being available at short notice.

Checks are also made in the case of new stations and new equipment being cut into service, this being necessary in order to ensure minimum disturbance to equipment already in service, and also to obviate the necessity of later interruptions, as any alterations thus discovered to be necessary can be made before equipment is made alive and permanently connected into service.

SECTION IV

ELECTRICAL ENGINEERING AND CONSTRUCTION NIAGARA SYSTEM

QUEENSTON GENERATING STATION

Power House Superstructure

The construction of the superstructure of Queenston generating station has been continued and the general construction of the 300 feet of the building has been practically completed including all interior walls and compartments necessary for the installation of electrical apparatus for four units.

The building tile for the partitions was supplied by the National Fire Proofing Company of Canada, Limited, Toronto, and the tile for the exterior walls by the Interlocking Tile Company, Limited, Toronto.

The toilet fittings were supplied by the Empire Brass Manufacturing Company, Toronto.

The interior doors and trim are kalamein covered and were supplied by the A. B. Ormsby Company, Limited, Toronto.

The metal lath throughout the station is of Hyrib lath supplied by the Trussed Concrete Steel Company of Canada, Walkerville.

The roofing of the building is being done by the Carmichael Waterproofing Company Limited, Toronto, and the roofing tile for the roof surface is being supplied by the Department of the Provincial Secretary.

A twelve-ton hoist supplied by the Northern Crane Works Company has been installed in the south end of the station.

The fans for generator cooling purposes have been installed on four units.

The passenger elevator in the south end of the station has been installed by the Turnbull Elevator Company, Toronto.

Screen House

The construction of the Queenston screen house has been continued and the general construction of 400 feet of the building is proceeding, including the Administration building at the south end. The tile for the interior partitions is being supplied by the National Fire Proofing Company of Canada, Limited, Toronto.

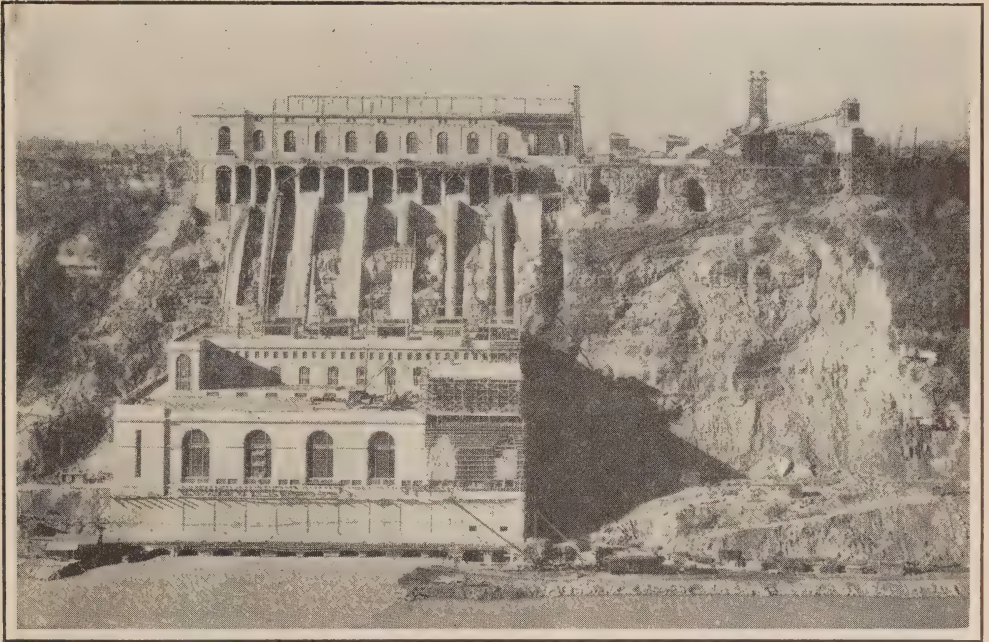
Generators

As projected in last year's Report, No. 1, 45,000-kv-a. main unit was "turned over" for the first time on December 26, 1921. On December 28, the opening of the power house was officially celebrated. After drying run, the generator was phased out and paralleled with the Niagara system on January 22, 1922. Necessary adjustments were made and the machine was put into commercial service on January 26, 1922.

No. 2 unit was "turned over" for the first time on February 20, 1922, the generator phased out after drying on March 15, and put on commercial load on March 16, 1922.

**QUEENSTON-CHIPPAWA DEVELOPMENT**

Queenston power house: General view from United States side of Niagara river,
December 20, 1921



QUEENSTON-CHIPPAWA DEVELOPMENT

Queenston power house: General view from United States side of Niagara river opposite No. 5 unit, November 1, 1922. Compare with preceding illustration to note progress made during year

On April 16, this unit broke down due to a ventilating fan coming off the rotor and damaging the armature windings. The winding was repaired by the manufacturers under their contract guarantee and placed in service again. The repaired generator was "turned over" again on May 28, and placed in commercial operation once more on May 31, 1922.

No. 3 unit was "turned over" for the first time on July 25, and the drying out of the generator was completed on August 11. Tests for efficiency characteristics, sudden short circuit and overspeed were made during the following week to ascertain whether contract guarantees were met. These were all successful except the short circuit test under which the bracing on the armature winding failed. The armature was rewound with heavier bracing by the manufacturers under the terms of their contract guarantee and the unit started up again on September 23. After drying out it was put on commercial load on October 3, 1922.

No. 4 unit is nearly assembled and will be ready to go on load about December 1. It is expected that No. 5 unit will be ready for service in March, 1923.

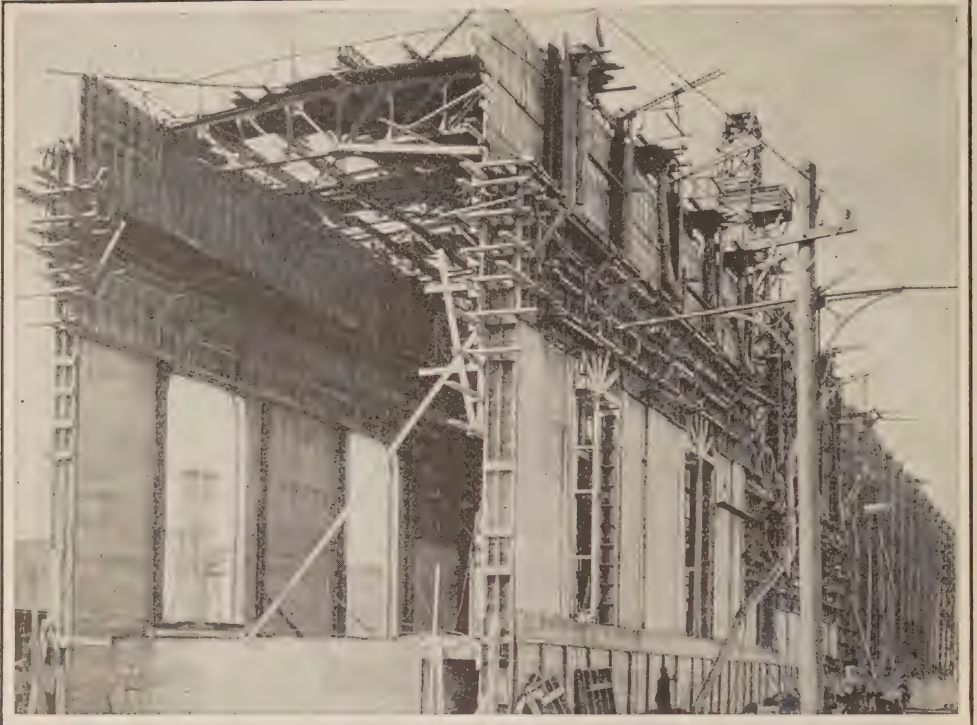
Transformers

Three banks each consisting of three 15,000-kv-a., single phase transformers have been installed to take care of the output of Nos. 1, 2 and 3 generators, each bank being ready in time to go into service with its respective generating unit. The remaining six transformers of the original order of fifteen have been partly installed.

One bank is illustrated in the accompanying cut.

Switching Equipment

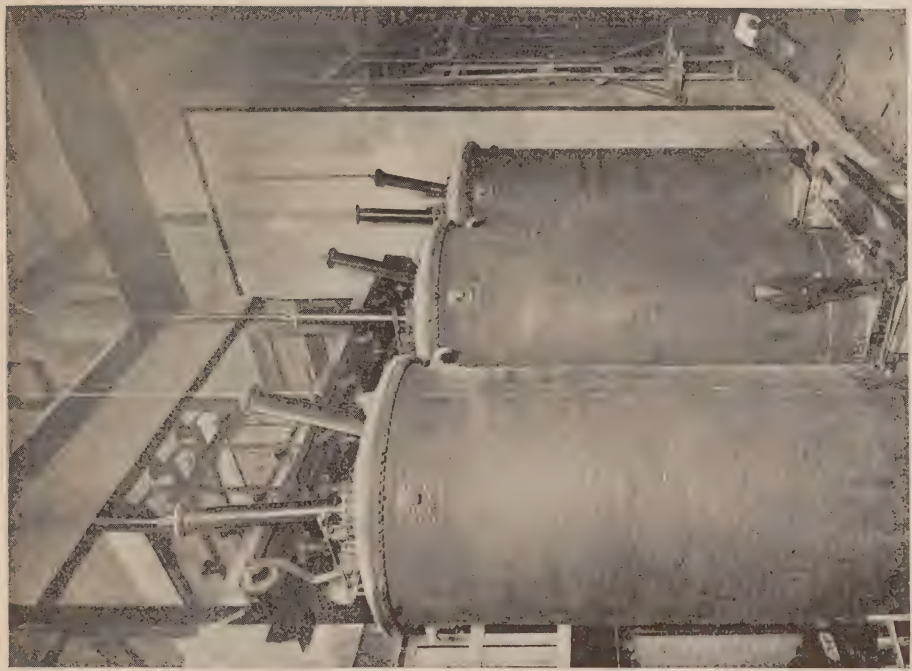
The necessary switching equipment, including oil circuit-breakers, bus-bars and connections and their insulators, instrument transformers, reactors and



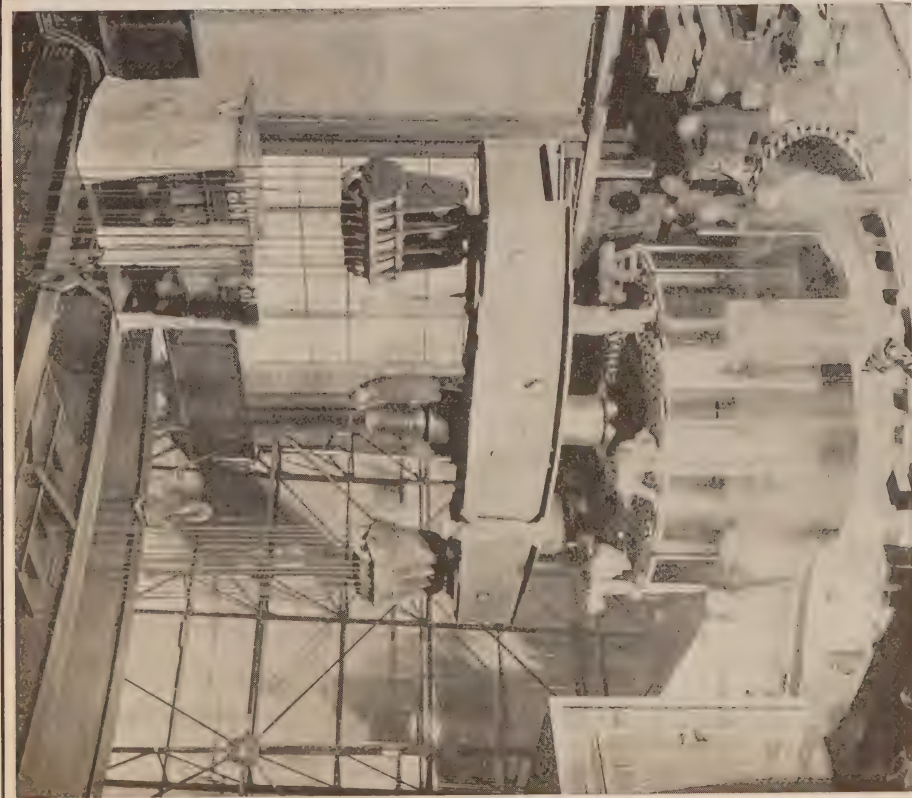
QUEENSTON-CHIPPAWA DEVELOPMENT
Screen house from south-east. October 8, 1921



QUEENSTON-CHIPPAWA DEVELOPMENT
Administration building and screen house from south-east, November 3, 1922. Compare with preceding illustration to note progress made during year



QUEENSTON-CHIPPAWA DEVELOPMENT
Queenston power house: No. 1 transformer bank and delta bus,
February 2, 1922

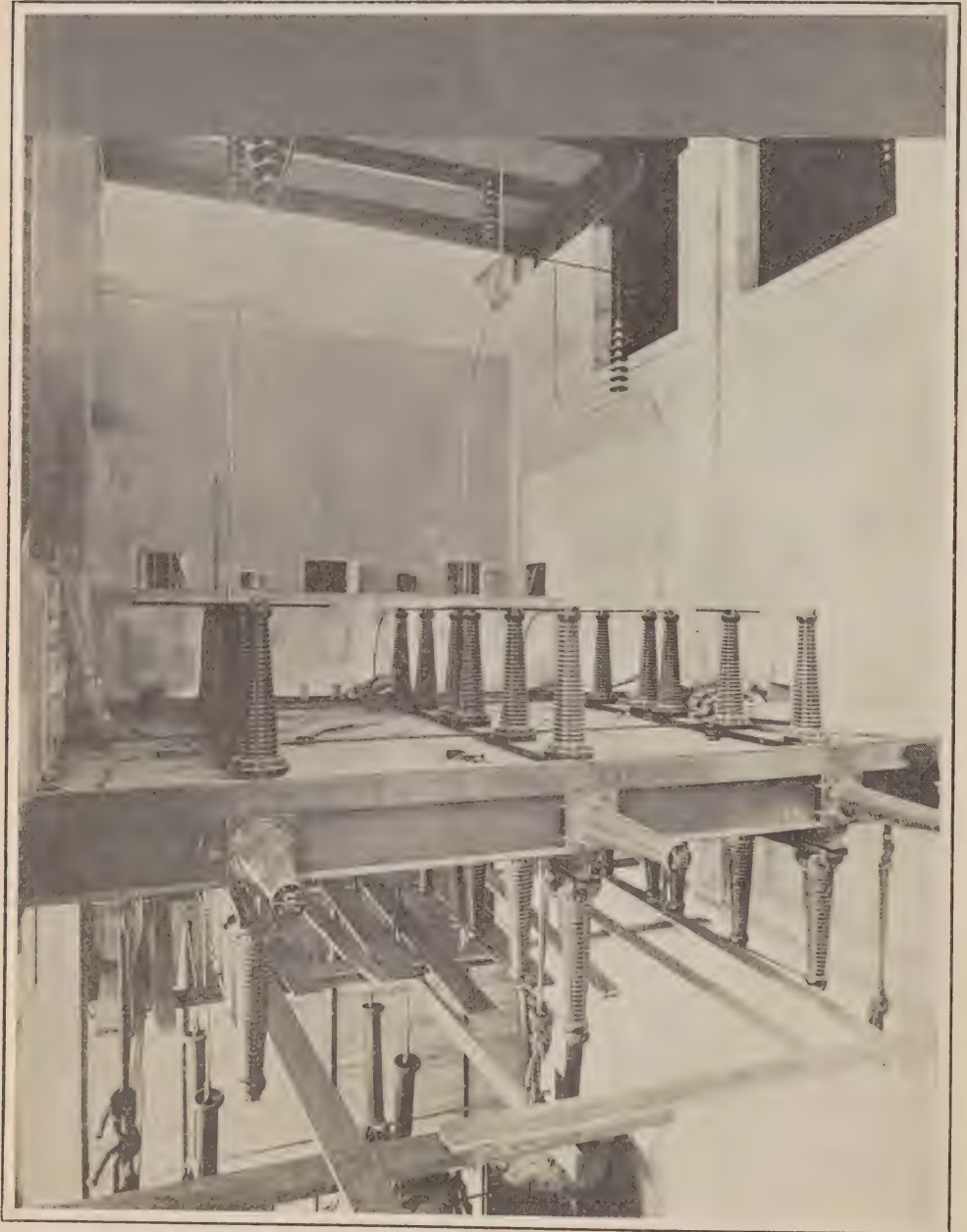


QUEENSTON-CHIPPAWA DEVELOPMENT
Queenston power house: Erection of No. 2 generator. Installing rotor,
December 15, 1921

protective equipment for each unit, was installed and ready to go into service with the unit which it controlled in each case.

Switchboards

Temporary switchboards have been installed for control of units 1 to 4 and "service" pending the construction of that part of the building in unit bays 4 and 5 which is to house the permanent control equipment. Designs of the per-



QUEENSTON-CHIPPAWA DEVELOPMENT

Queenston power house: 110,000-volt bus connections and disconnecting-switches for No. 3 unit.
August 4, 1922

manent control room have been worked out and the building is now practically complete. It is expected that the permanent switchboard will be ready by the time No. 5 unit is ready for service.

Slate for the permanent switchboard was ordered from A. H. Winter Joyner, Limited, in July. Other switchboard equipment will be moved from the temporary control room where it is now installed.

Grounding Neutral

Neutrals of generators have been operated dead grounded hitherto. The Canadian Westinghouse Company are supplying a temporary resistance for the neutrals of units 1 and 2 until opportunity occurs to add bracing to the armature windings on these machines.

The 110,000-volt neutral has been operated ungrounded at this station, the ground through resistance at Niagara transformer station being depended upon. However, as the bulk of the Niagara System load is being transferred to Queenston, a neutral grounding resistance of 100 ohms is being installed and should be ready for service in December, 1922.

Station Service

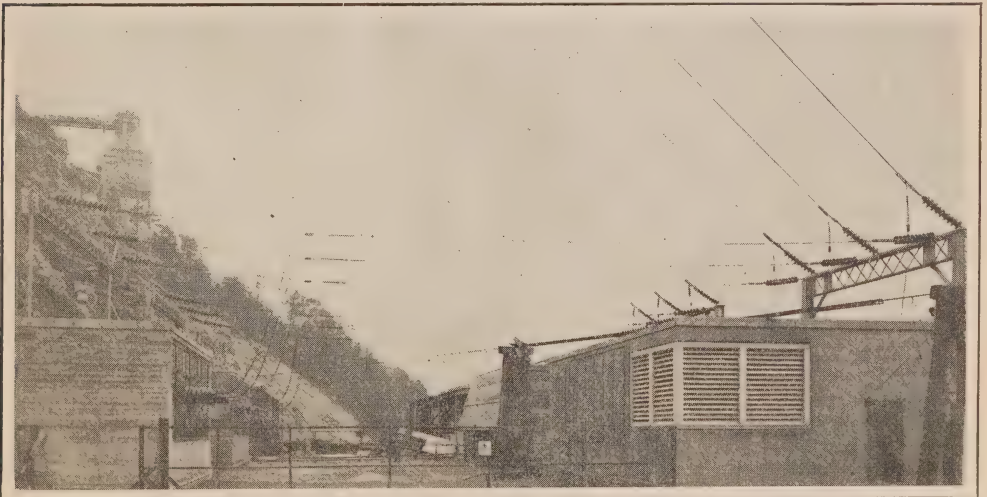
Station service distributing and control switchboards at service station "A" with all feeders to necessary services and all batteries and control circuits were completed in December, 1921, and Whirlpool distributing station was available as a source of power to enable No. 1 unit to be started.

Service generating unit "A" (2,200-kv-a.) was started up for drying run on January 11, and put on load on January 26, 1922. Service unit "B" was put on load on March 18.

Auxiliary Systems and Equipment

Lubrication systems, transformer oil systems and cooling water piping systems were completed for each unit by the time the unit itself was ready for operation.

The 150-kw., auxiliary exciter set was delivered by the Swedish General Electric Company in February, 1922, and was set up in a temporary location.



QUEENSTON-CHIPPAWA DEVELOPMENT

Queenston power house: Outgoing lines connected through rear pent houses on roof.
August 4, 1922

Outgoing Lines

Outgoing 110,000-volt lines were strung for three units. These run through standard 110,000-volt entrance bushings in the pent houses on the station roof where they connect to section N20x50 of the Niagara transmission system at the bottom of the span strung from a roof structure to towers at the top of the escarpment.

ONTARIO POWER COMPANY

The bursting of No. 15 generator in the power house on April 20, 1922, damaged the adjacent No. 16 generator and caused the collapse of the roof over units Nos. 15 and 16 and twisting of the roof steel between units No. 14 and No. 15.

The damage to the building was repaired during the year. The generators, however, had not been replaced by October 31, 1922.

The repairs and replacements to the building structural steel were carried out by the Standard Steel Construction Company. The roofing was done by the Carmichael Waterproofing Company and the remainder of the work was undertaken by the Construction department.

The accompanying cuts illustrate forcibly the damage done by this accident. The original installation was described and illustrated in the 1918 and 1919 Annual Reports.

Chippawa Distributing Station

In order to supply power to the village of Chippawa and the Chippawa rural district including the village of Stevensville, the Commission authorized, on August 2, 1922, the purchase and installation of the equipment necessary for a pole-type station to be fed from one of the 12,000-volt lines from the Ontario Power Company's distributing station. The equipment will consist of a 300-kv-a., 3-phase, special rural-class transformer with 12,000-volt choke-coils, disconnecting-switches and fuses, and two 4,000-volt feeders with fuses and a graphic-recording wattmeter for the Chippawa feeder.

The transformer has been purchased from the Packard Electric Company and layout drawings are being made up. The installation will be done by the Construction department and it is expected that the work will be completed in December, 1922.

Beamsville Distributing Station

In order to supply power to the Beamsville rural district, the Commission, on June 19, 1922, authorized the purchase and installation of the equipment necessary for a pole-type station to be fed from a new 12,000-volt line from St. Catharines. The equipment will consist of a 300-kv-a., 3-phase, special rural-class transformer manufactured by the Packard Electric Company with 12,000-volt choke-coils, disconnecting-switches and fuses, and one 4,000-volt feeder with fuses and a graphic-recording wattmeter. The work is being carried out by the Construction department and will be completed in November, 1922.

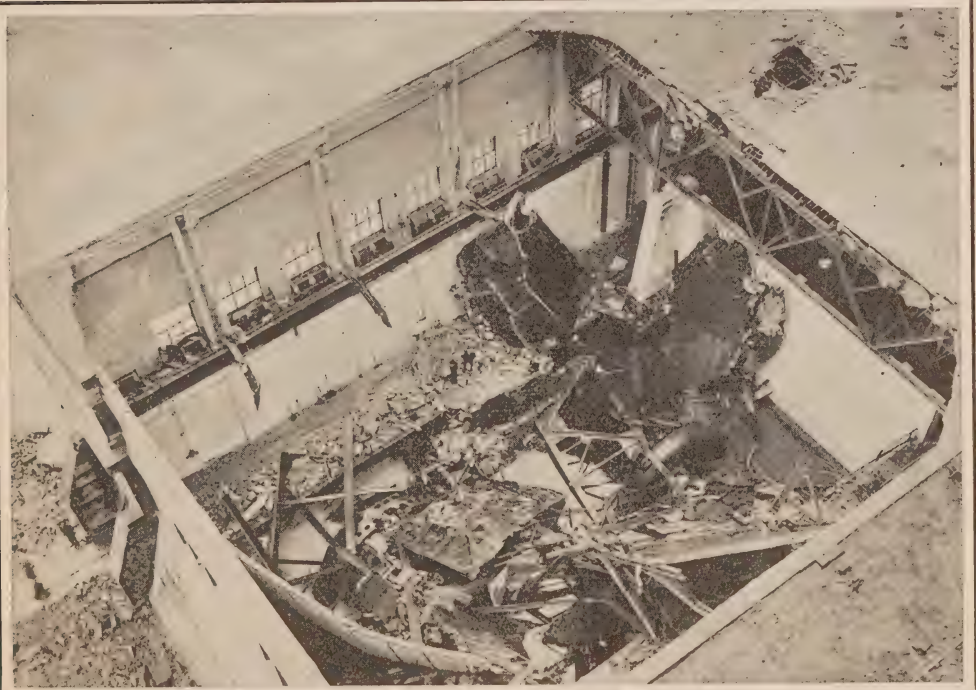
Grimsby Distributing Station

In order to supply power to the Growers' Cold Storage and Ice Company, Limited, at Grimsby, the Commission, on June 19, 1922, authorized the purchase and installation of the equipment necessary for a pole-type station to be fed from a new 12,000-volt line to be extended from Beamsville. The station consists of a 300-kv-a., 3-phase, special rural-class transformer supplied by the Packard Electric Company with 12,000-volt choke-coils, disconnecting-switches and fuses, and one 4,000-volt feeder with fuses. The graphic-recording metering



ONTARIO POWER COMPANY

Accident in power house, April 20, 1922: View showing one segment of rotor which was thrown through roof of power house when No. 15 generator burst, lying where it fell beside No. 11 unit.



ONTARIO POWER COMPANY

Accident in power house, April 20, 1922: Birdseye view from top of cliff showing damage done by bursting of No. 15 generator

equipment is located in the Growers' Cold Storage and Ice Company's station but is the property of the Commission. The work was completed by the Construction department on October 31, and is ready to deliver service as soon as the customer's equipment is in condition to receive it.

Montrose Distributing Station

This station was taken out of service in January, 1922, and partially dismantled. In August, 1922, it was again placed in service to supply power to Chippawa and Stevensville villages and to the contractors for dredging out the Welland River section of the Chippawa canal.

Whirlpool Distributing Station

This station was taken out of service in August, 1922, and is being dismantled.

NIAGARA TRANSFORMER STATION

The connection of No. 5 Ontario Power Company feeder to the main 12,000-volt bus between No. 2 and No. 3 feeder structures of the Ontario Power Company at the north end of the station, as outlined in last year's Report, was completed and the feeder placed in service on November 20, 1921.

The installation of type-"CR," reverse-power and type-"CO," ground relays with current-transformers, as outlined in last year's Report, was completed on the Ontario Power Company feeders in July, 1922, but held up on the Canadian Niagara Power Company feeders on account of inability to get interruptions. Work, however, is now proceeding on these feeders and will be completed in November, 1922.

The installation of 110,000-volt outdoor breakers in A1 and A4 lines, as outlined in last year's Report, has been completed, 1A4 being finished on February 1, 1922, and 1A1 on March 16, 1922. In July, 1922, it was decided to add grounding clamps and an operating platform on the Dundas side. These were completed in October, 1922.

On November 1, 1921, work was started on the installation of a ventilating system in the basement for quickly removing the smoke in event of trouble on the 12,000-volt switching equipment. The equipment consists of 110-volt direct current fans located in the windows and operated from storage batteries arranged in three circuits, one for the north section and two for the south section, and controlled by knife switches located on the main floor. The fans were purchased from and installed by the Canadian Blower and Forge Company, while the conduit and connections were installed by the Construction department, the work being completed and placed in service on September 18, 1922.

In January, 1922, it was decided to install new 12,000-volt disconnecting switch blades equipped with resistors on the potential transformer switches on all the Ontario Power Company feeders not equipped with same, and on the two sets of the main Ontario Power Company bus potential transformers. These were ordered from the Canadian Westinghouse Company and installed by the Construction department, the work being completed and in service on September 17, 1922.

In February, 1922, authorization was given for the installation of one 110,000-volt, 300-ampere, non-automatic, electrically-operated oil breaker to replace the existing bus-tie breaker which was of insufficient capacity; also for the changing of contacts from 200- to 400-ampere capacity and installing of new tank linings in the two 110,000-volt, outdoor resistance breakers in the Niagara-Dundas lines (N1x2) and also for changing the current-carrying parts from 200- to 400-ampere capacity and installing stronger insulators on the two sets of bus disconnecting-switches. Current-carrying parts for bus disconnect-

ing-switches were purchased from the Canadian Westinghouse Company and were installed with insulators from stock by the Operating department in February, 1922. The bus-tie, oil breaker—one that had been rebuilt—was installed and placed in service on September 17, 1922. New current-carrying parts for outdoor resistance breakers were delivered by the Canadian Westinghouse Company in September, while tank linings had been purchased by the Operating department in October, 1921. Installation of these will be completed early in 1923.

A start was made on May 31, 1922, with the purchase and installation of three Canadian General Electric Company, current-limiting reactors (type C.L.S., 25-cycle, 2,300-kv-a., 1,150-volts, 2,000-amperes) with three shunt resistors to replace the three "Metropolitan" reactors in set "A" location. When these last were damaged in August, 1921, two similar reactors were removed from set "C" location and installed in set "A" and the bus at set "C" connected with jumpers. In October it was decided to install the new reactors in set "C" location. The reactors were delivered during the latter part of October and installation will be completed early in 1923 by the Operating department.

Niagara Falls Municipal Station

Plans and specifications for the new combined substation and office building, as outlined in the last report, were prepared by Mr. C. M. Borter, of Niagara Falls, as the architect for the Niagara Falls Commission. The contract for the building was placed by that body with the Robertson Construction and Engineering Company of Niagara Falls, Ontario. Construction work was started in May and it is expected that the building will be completed in December, 1922.

Engineering assistance was given by the Commission in the preparation of plans for the oil and cooling-water systems in connection with the station. The cooling-water system included a cooling pond, for which plans were prepared, the work being carried out by the municipal Commission. Instructions were issued to the Construction department to purchase and install all oil and water piping. Assistance was also given to the local Commission in the purchase of a water pump, a transformer-oil storage tank, a chain block for dismantling transformers, and a transformer truck.

Detailed plans of the substation equipment have been completed. The contract covering the switchboard, the 2,300-volt, switching equipment, the 12,000-volt, lightning arresters and one 80-kv-a., 3-phase, induction regulator was placed with the Canadian General Electric Company.

The local Commission was given engineering assistance in connection with the purchase and testing of a new 1,500-kv-a., 13,200/2,300-volt, 3-phase, oil-insulated, water-cooled transformer bought from the Canadian Crocker-Wheeler Company for use in the new station.

The station load will be totalized on the 12,000-volt incoming lines and metered by graphic-recording wattmeter and recording, reactive, volt-ampere meter, and watthour meter, these being the property of the Commission.

In July the Construction department placed the conduit in the main floor of the substation and in September commenced the work of installing the station equipment. It is expected that sufficient equipment will be installed to give a partial service in December and that the installation will be completed early in 1923.

Stamford Township Municipal Station

The change outlined in last year's Report was carried out by the Construction department and completed and placed in service on January 28, 1922.

DUNDAS TRANSFORMER STATION

In January, 1921, it was decided to change the current transformers on the Hamilton feeders (Nos. 251, 252, 257 and 258) to provide increased capacity. This was done and the new current transformers placed in service on February 18, 1922, by the Operating department.

In August, 1922, authorization was given to replace the disconnecting-switches and choke-coils on feeders 257 and 258 by new ones of larger capacity. This will be completed early in 1923 by the Operating department.

In the month of August the preparation of plans for a 45-foot extension to the east end of the present building was commenced.

The structural steel was contracted for with the Hamilton Bridge Works in September.

Instructions were issued to the Construction department in September covering the complete building, and on October 31 approximately 25 per cent. of the work was done, while practically all the required material was on the site on that date.

This extension is to house two new 110,000-volt oil breakers, with necessary connecting material and metering equipment for two 110,000-volt lines. The installation will be completed early in 1923.

Dundas Rural Distributing Station

In order to supply power to the Dundas rural district, the Commission authorized the purchase and installation of the equipment necessary for a pole-type station to be fed from a 13,200-volt line from Dundas transformer station. The station will consist of a 300-kv-a., 3-phase, outdoor-type transformer with 13,200-volt choke-coils, disconnecting-switches and fuses, and one 2,300-volt feeder with fuses and graphic-recording wattmeter equipment.

Drawings are now being prepared. The installation will be done by the Construction department and is expected to be completed early in 1923.

Hagersville Distributing Station

The three 75-kv-a., single-phase, indoor transformers, recently removed from Hagersville distributing station and stored in the station yard, were shipped to the Canadian Westinghouse Company in September to be converted to outdoor-type transformers, and when changes are completed to be shipped to the Hamilton transformer station.

Lynden Distributing Station

In order to serve a rural load out of this station authorization was given in February, 1922, to purchase and install the necessary equipment for a rural feeder, including a demand meter for measuring the load. The work was done by the Construction department and the new feeder placed in service on July 31, 1922.

TORONTO TRANSFORMER STATION

The differential relay protection for the five banks of power transformers mentioned in last year's Report was completed and placed in service on January 14, 1922.

Three of the 5,000-kv-a. transformers purchased from the Canadian General Electric Company for use on the Niagara system were shipped to Toronto transformer station, where they have been stored in the yard for emergency use. The transformers were delivered to Toronto transformer station in July.

As the two 110,000-volt line, oil circuit-breakers which were installed in Toronto in 1910 did not have sufficient interrupting capacity for the present system it was decided in September to replace both breakers. Accordingly an order was

placed with the Canadian Westinghouse Company for two type-"G.A.4," indoor, oil circuit-breakers including bushing-type current-transformers.

While the new breakers are being installed reverse-power relays will be provided for the 110,000-volt lines.

The work will be carried out early in 1923.

As a temporary measure to increase the transformer capacity it was decided in October to move the three 5,000-kv-a. transformers, which were in storage in the yard, to a convenient location north of the station, and to connect up to the 110,000-volt bus and to the 13,200-volt buses in the station. This will be accomplished by extending the 110,000-volt bus through the north wall to a type-"G.A.4," Westinghouse, outdoor breaker. The 13,200-volt connections will be made with armoured cable through two oil circuit-breakers belonging to the Toronto Hydro-Electric system. Differential relay protection will be provided using high-voltage current-transformers manufactured by the Production and Service department and low-voltage current-transformers purchased from the Ferranti Meter and Transformer Manufacturing Company, Toronto. A wood-pole structure will be erected over the transformers to carry the high- and low-voltage connections.

This installation of the transformers will be completed early in 1923.

All the work referred to at the Toronto transformer station has been or will be done by the Construction department.

LONDON TRANSFORMER STATION

In February a 46-ton transformer truck was purchased to accommodate the 5,000-kv-a. transformers being installed. A set of lifting beams for the transformers was purchased in January.

During the year several minor alterations were made to the building, including the addition of a small room for storing synchronous condenser, spare armature coils and the installation of a shower bath with water heater.

The four 5,000-kv-a. transformers referred to in last year's Report were completely assembled and on April 9, three of these were placed in service in No. 2 compartment. The three 2,500-kv-a. transformers were then removed from No. 3 compartment and shipped to Guelph transformer station on May 1. The two 1,250-kv-a. transformers were stored in the yard at the London transformer station for a short time, and were shipped to Preston transformer station in October.

The changes in the switching equipment referred to in last year's Report and the changes in the building will be completed in January. This work is being done by the Construction department, which also did all the work of moving the transformers.

To release the three 2,500-kv-a. transformers now in No. 1 compartment for one of the other transformer stations on the Niagara system it has been decided to install in the London station three more of the 5,000-kv-a. transformers purchased from the Canadian General Electric Company for use on the Niagara system.

These transformers will be ready for service early in 1923.

To provide storage space for construction material and for line and station maintenance supplies a storehouse of corrugated iron on wood frame approximately thirty feet by sixty feet, has been erected to the north-west of the London transformer station. This building was erected by the Construction department.

To provide a means of bringing the 10,000-kv-a. synchronous condenser to rest quickly in case of fire in the machine a mechanical brake has been ordered from the Dominion Bridge Company, Montreal. At the same time doors, to be

tripped by the differential relays, are being placed in the air ducts and the condenser itself will be totally enclosed. This work will be carried out by the Construction department.

Delaware Distributing Station

In August, 1922, authorization was given to change the three-phase, 4,000-volt Delaware feeder in this station, which serves the Delaware load, into three single-phase feeders, one to serve Delaware and two to serve Melbourne and Komoka. The recording wattmeter will be removed from the Delaware panel and replaced by two maximum-demand meters, one of which will be connected to measure the Delaware load and the other the Melbourne and Komoka loads. This installation will be completed early in 1923 by the Construction department.

Exeter Distributing Station

In order to supply power to the Exeter rural district the Commission authorized the purchase and installation of the equipment necessary to bring out a 4,000-volt rural feeder from the Exeter distributing station. This feeder is to be tapped off the Dashwood-Zurich feeder inside the station, and will be metered by a demand meter.

Drawings are now being prepared and the work is expected to be completed early in 1923.

London Municipal Station

The new municipal station mentioned in last year's Report went into service in March, 1922, the work being done by the local Commission.

GUELPH TRANSFORMER STATION

The work of installing the bank of three 2,500-kv-a., oil-insulated, water-cooled, single-phase, 25-cycle, 63,500-110,000 Y/13,200-volt transformers, including differential-relay protection for the same, which was referred to in last year's Report, was carried out this year and placed in operation on May 29, 1922. Designs have been prepared covering the changes required to install new 13,200-volt, oil circuit-breakers in the switch compartments now used for the General Electric K-12 oil switches, have been in service since the station was built and whose rupturing capacity is no longer adequate. An order was placed with the Ferranti Meter and Transformer Manufacturing Company, Limited, for six 600-ampere and one 900-ampere, 13,200-volt, triple-pole, single-throw, oil circuit-breakers with mechanically-operated, remote-control mechanism, the complete equipment being manufactured by Ferguson, Pailin, Limited, Manchester, England. Designs have also been prepared covering protective screens in the lightning-arrester gallery, improvements in the oil piping systems to connect the 110,000 volt, oil circuit-breakers and the installation of a shower bath.

Minor alterations to the building were necessary to accommodate the transformers referred to above and were duly carried out.

PRESTON TRANSFORMER STATION

Three 110,000-volt line entrances were installed.

Instructions for alterations to piping to accommodate transformers of larger capacity were issued in October.

As mentioned in last year's Report, it was decided to increase the capacity of the 13,200-volt oil circuit-breakers purchased for use in the feeders when changing this station from 6,600 volts to 13,200 volts. It was also decided to change the original 6,600-volt, No. 1 transformer bank and its bus and feeders to 13,200 volts with a new bus and switch structure for this section. Balanced

relay protection was also installed on the two Galt feeders and improved relays were installed on the low-voltage transformer breakers.

This installation was done by the Construction department and placed in service on May 28, 1922, and completed in June.

In June, 1922, it was decided to replace No. 1 bank of 750-kv-a. transformers with a bank of 1,250-kv-a. transformers, together with the equipment necessary for differential relay protection for this bank. Two transformers were obtained from London transformer station and one from Guelph transformer station. A spare will later be secured from York transformer station. The new bank of transformers was placed in service on October 21, 1922, temporarily without differential relay protection and the remainder of the work, which is being done by the Construction department, will be completed early in 1923.

Forbes Mills Substation

In last year's Report it was stated that arrangements had been made to reduce the supply voltage from 6,600 volts to 2,200 volts and reconnect the three 75-kv-a. transformers for the lower voltage. These changes were carried out with the modification that the voltage was reduced to 4,000 volts, not to 2,200 volts, as originally proposed.

Galt Municipal Station

The new substation built by the local Commission was completed and placed in service in July, 1922.

Grand River Valley Railway Substation at Preston

The graphic demand-meter mentioned in last year's Report was placed in temporary service on November 18, 1921, and completed December 1, 1921.

Hespeler Municipal Station

Changes in supply voltage from 6,600 volts to 13,200 volts and rearranging station layout as mentioned in last year's Report were carried out and the station placed in temporary service on May 28, 1922, and the work completed on June 22, 1922. The secondary voltage was also changed from 2,300 volts to 4,000 volts, the work being done by the Construction department. In September the local Commission removed the three 75-kv-a. transformers, replacing them with three 170-kv-a., Canadian General Electric Company transformers obtained from Preston municipal station.

Preston Municipal Station

Changes in station layout and equipment, as mentioned in last year's Report, were carried out by local labour under the supervision of an engineer from the Canadian Westinghouse Company, completed and placed in service on May 28, 1922. The secondary voltage was also changed from 2,300 volts to 4,000 volts.

KITCHENER TRANSFORMER STATION

Designs have been prepared covering the changes required to install new 13,200-volt, oil circuit-breakers in the switch compartments now used for the G.E.K.-12, oil switches which have been in service since the station was built, and whose rupturing capacity is no longer sufficient. An order was placed with Ferranti Meter and Transformer Manufacturing Company, Limited, for ten 600-ampere and two 900-ampere, 13,200-volt, triple-pole, single-throw, oil circuit-breakers with mechanically-operated remote-control mechanism, the complete equipment being manufactured by Ferguson, Pailin, Limited, Manchester, England. Designs are also in hand covering the installation of a 13,200-volt emergency bus with connection to each feeder, changes in the feeder relays, installation of a shower bath and a concrete settling basin.

Kitchener Municipal Station No. 2

The installation of the switching equipment mentioned in last year's Report was completed on December 13, 1921, by the Construction department and placed in service on April 9, 1922.

St. Jacobs Distributing Station

Estimates have been made up for changing the present distributing voltage from 550 volts to 4,000 volts by changing the transformer connections, also the installation of a new 4,000-volt feeder to Conestogo, with a maximum-demand meter for this feeder at St. Jacobs distributing station. The St. Jacobs feeder is now metered at 4,000 volts instead of 550 volts, while the three 10-kv-a., pole-type transformers on the St. Jacobs feeder are being reconnected to step down from 4,000 to 550 volts instead of up to 4,000 volts as before. This work should be completed early in December, 1922, the work being carried out by the Construction department.

South Waterloo Township Distributing Station

Owing to the increasing load in this district, authorization was given in October, 1922, to install a 300-kv-a., 3 phase transformer at this station to replace the present bank of three 20-kv-a., single-phase transformers. This work will be done early in 1923.

STRATFORD TRANSFORMER STATION

During September and October plans were prepared covering alterations to the oil and air piping of No. 1 transformer bank in the station to accommodate 1,250-kv-a. transformers.

In December, 1921, authorization was given to install a bank of 1,250-kv-a. transformers in No. 1 pockets of this station, together with the equipment necessary for the differential protection for this bank and the necessary high- and low-tension switching equipment. One transformer was obtained from Kent transformer station, where it had been stored on a reserve equipment work order. A second transformer was obtained from Stratford transformer station, where it had been stored on a reserve equipment work order. The spare transformer for No. 2 bank was taken and used as the third transformer for this bank,

A rebuilt, oval-tank, type-"GA," oil-switch stored at Dundas transformer station was obtained and installed as a high-tension transformer breaker. The low-tension transformer breaker is a type-"K24."

This installation will be completed early in 1923, the Construction department doing the work.

On August 10, 1922, authorization was given to install a spare 1,250-kv-a. transformer in this station. This transformer was obtained from Kent transformer station where it was held on a reserve equipment work order. This transformer was installed in October, 1922.

Drayton Metering Station

The recording, reactive, volt-ampere meter mentioned in last year's Report was placed in temporary service on December 5, 1921, and its installation finally completed on December 31, 1921.

Milverton Distributing Station

Owing to the increasing load it was necessary to increase the transformer capacity at this station. Authorization was given in September, 1922, to replace the three 75-kv-a. transformers by three 150-kv-a. units obtained from Petrolia, where they were stored on a reserve equipment work order. This installation was done by the Construction department and was completed and the transformers placed in service on October 29, 1922.

The three 75-kv-a. transformers were shipped to Petrolia waterworks distributing station.

Stratford Municipal Station

The 750-kv-a., 3-phase transformer and 100-kv-a., 3-phase voltage regulator mentioned in last year's Report were installed by the Construction department, the work being completed on January 28, 1922.

The transformer above mentioned broke down in service during the year, as a result of which the Engineering department made an inspection and report for the Stratford Public Utilities Commission, establishing the responsibility for repairs as lying with the manufacturers, who duly repaired and replaced it in service.

ST. MARYS TRANSFORMER STATION

Estimates were prepared covering the cost of a scheme to augment the cooling-water supply to accommodate additional transformer capacity anticipated.

In August, 1922, authorization was given to install transformers of greater capacity in this station and plans are being prepared to cover this work, which will be completed early in 1923.

St. Marys Cement Company Distributing Station

Engineering information was supplied in connection with the replacement of a 500-kv-a., single-phase transformer that had broken down in service at that station.

WOODSTOCK TRANSFORMER STATION

In order to cope with the growing load, arrangements are being made to increase the transformer capacity of the above station by replacing the 1,250-kv-a. transformers with 2,500-kv-a. units. This work will be completed early in 1923.

The installation of two larger capacity current-transformers for metering on the rural feeder out of this station was found necessary due to increasing load. Arrangements have been made for this change, which will be done by the Operating department, early in November.

ST. THOMAS TRANSFORMER STATION

Owing to increasing load the present bank of 750-kv-a. transformers is to be replaced by a bank of 1,250-kv-a. transformers with differential-relay protection. This work will be completed early in the coming year.

Port Stanley Distributing Station

The three 75-kv-a. transformers stored outside Port Stanley distributing station were shipped to London transformer station in January, 1922, for station service.

BRANT TRANSFORMER STATION

During the spring the installation of a deep well pump to pump water from the well inside the station was completed. A pump house also was erected.

The deep well pump referred to above was transferred from Preston transformer station.

Brantford Municipal Station

In March, 1922, on the recommendation of the Commission, the Brantford Hydro-Electric Commission authorized the installation on the two incoming lines entering their station of improved relay protection consisting of six reverse-power relays (three per line) and three inverse, definite-time, overload relays (three point) for the two lines; and also the moving of the switchboard panel with 26,400-volt, totalizing meters from the high-tension room to the new control

room. The installation was done by the Operating department, being completed in October.

Lake Erie and Northern Railway Substation at Simcoe

It was decided to install a graphic wattmeter in the Lake Erie and Northern Railway substation at Simcoe to replace the existing wattmeter. This installation was made by the Operating department and the new meter placed in service on February 3, 1922.

Simcoe Municipal Station—Port Dover Feeder

The metering panel and 4,000-volt feeder for Port Dover mentioned in last year's Report was installed by the Construction department and completed and in service by December 22, 1921.

COOKSVILLE TRANSFORMER STATION

No changes were made in this station during the year.

Port Credit Distributing Station

The change in the low-tension voltage from 2,300 volts to 4,000 volts was deferred for a year. It is expected that this change will be effected early in 1923.

Mimico Distributing Station

On account of transformer trouble this station has not been in use for some time. Etobicoke township and Mimico being fed from the Etobicoke distributing station. Arrangements therefore were made to move to York transformer station the three 150-kv-a. transformers, together with switching and metering equipment for two 4,000-volt feeders, to supply Etobicoke township from York transformer station.

The switching equipment which will not be required in York transformer station will be transferred to the stores.

KENT TRANSFORMER STATION

Instructions were issued to the Construction department in July to purchase and install a shower bath in the station. This work was carried out during the summer.

The relay protection on the incoming and outgoing 110,000-volt lines, mentioned in the 1921 Report, was completed and placed in service on November 2, 1921, the Operating department doing the work.

The increased transformer capacity mentioned in the 1921 Report was completed and the bank of 2,500-kv-a. transformers (No. 2) was placed in service on December 11, 1921. The installation of the 26,400-volt emergency bus and the improved relay protection on the 26,400-volt feeders was completed and placed in service on September 15, 1922, the Construction department doing the installation.

In August, 1922, authorization was given to further increase the transformer capacity of this station. It was decided to replace No. 1 bank of 1,250-kv-a. transformers with a bank of 2,500-kv-a. units together with the current-transformers required for the differential-relay protection for this bank. These transformers are to be obtained from Essex transformer station as soon as they are released, which will be early in 1923.

Dominion Sugar Company—Wallaceburg

The metering equipment mentioned in last year's Report was duly installed by the Operating department on March 1, 1922.

Fletcher Distributing Station

In order to serve the villages of Merlin and Fletcher, authorization was given in October, 1922, to purchase and install the necessary equipment for a pole-type station at Fletcher with one 150-kv-a., 3-phase transformer installed. This station will be fed from Kent transformer station and will be completed in December.

Forest Distributing Station—Thedford Feeder

The power feeder to supply the village of Thedford mentioned in last year's Report was installed and placed in service on April 9, 1922, this work being done by the Construction department.

Oil Springs Distributing Station

The 150-kv-a., 3-phase, rural-class transformer mentioned in last year's Report was installed and placed in service on April 12, 1922, the work being carried out by the Construction department. The "RA" wattmeter was replaced by a graphic wattmeter and three ammeters were added. A number of minor repairs to the meter house were made, this latter work being done by the Operating department and completed on April 6, 1922.

Petrolia Distributing Station

The 150-kv-a. transformers taken out of Petrolia and stored outside as reserve equipment were removed to Milverton distributing station in October, 1922.

Petrolia Waterworks Distributing Station

In order to supply power to the Petrolia Waterworks, the Commission, on June 1, 1922, authorized the purchase and installation of the equipment for a pole-type station with a bank of three 75-kv-a. transformers to be transferred from Milverton distributing station. This station will be fed at 26,400 volts from Kent transformer station. This installation will be completed early in November, 1922.

Watford Distributing Station

The installation of the 4,000-volt feeder for the village of Alvinston and the replacement of the 50-kv-a. transformer at Watford by one of 150-kv-a., as mentioned in last year's Report, were carried out by the Construction department and placed in service on March 22, 1922.

ESSEX TRANSFORMER STATION

During November, 1921, instructions were issued to the Construction department to make alterations to the oil and water piping to accommodate a new bank (No. 2) of 5,000-kv-a. transformers, the work being subsequently carried out.

Plans were prepared to increase the pumping capacity and to alter the piping to accommodate No. 1 bank of 5,000-kv-a. transformers. In connection with this work a pump was purchased from the Chippawa development.

Minor alterations were made to the building during the year, including the installation of a shower bath.

The installation of No. 2 bank of three 5,000-kv-a. transformers with one spare unit and 110,000-volt switching equipment was completed and placed in service on December 12, 1921, with the 26,400-volt leads connected through disconnecting switches to the switching equipment for bank No. 2.

The other changes mentioned in last year's Report were postponed to permit of more urgent work being done as conditions at Essex were satisfactory for the summer after the bank of 5,000 kv-a. transformers was placed in service.

All the switching equipment for same is now at the station, and the installation will be started about November 15 and completed early in 1923.

In August, 1922, the installation of a bank of 5,000-kv-a., 63,500/26,400-13,200-volt, oil-insulated, water-cooled transformers with suitable air-insulated current-transformers, to replace No. 1 bank of 2,500-kv-a. transformers, was authorized. These transformers are to be delivered about November 15, and will be installed by the Construction department under supervision of the manufacturing company's engineer.

In October, the building of a septic tank for sewage disposal was authorized to replace the existing cesspool, which has proven inadequate.

Belle River Distributing Station

In order to supply power to the village of Belle River and also to the Belle River rural district, the Commission on May 9, 1922, authorized the purchase and installation of the equipment for a pole-type station to be fed from a new 26,400-volt line from Essex transformer station. The station will consist of a 150-kv-a., 3-phase, rural-class transformer with 26,400-volt choke-coils, disconnecting-switches and fuses, and two 4,000-volt feeders with fuses and demand meters. The work is being carried out by the Commission's Construction department and will be completed in December.

Canard River Distributing Station

In March, 1922, authorization was given to purchase and install disconnecting switches and fuses on the pole structure at this station on the high-tension side of the transformer between the transformer and the tap on to the main 26,400-volt line. This work has been deferred owing to the possibility of dismantling this station and serving the load from Amherstberg distributing station.

Cottam Distributing Station

In March, 1922, authorization was given to purchase and install air-break switches and fuses on the pole structure at this station on the high-tension side of the transformer between the transformer and the tap on to the main 26,400-volt line. This work was done by the Operating department and was completed and placed in service in September, 1922.

Harrow Distributing Station

In order to give better service from this station authorization was given in May, 1922, to install air-break switches and fuses on the pole structure on the high-tension side of the transformer between the transformer and the tap on the main 26,400-volt line. This work was done by the Operating department and was put in service on October 1, 1922.

Petrimoux Distributing Station

In June the building of a sub-station at Petrimoux Corners for supplying additional power to the Amherstburg section of the Essex division of the Hydro-Electric Power Commission railways was authorized. The building is 27 feet 6 inches by 22 feet 10 inches, with roof pitched the narrow way to a centre ridge, 15 feet high at the walls and 19 feet high at the ridge. The foundations and floor are of concrete, the sides are galvanized iron on angle-iron frame, and the roof is of 2-inch planking and ready roofing, supported by steel, channel-iron trusses. A small section at one side is enclosed with wood and glass partitions and wood ceiling to be used as an office.

The electrical equipment includes the 26,400-volt switching equipment for one incoming line, one 550-kv-a. 26,400/440-volt, oil-filled transformer, one 500-

kw., 750/600-volt rotary converter with a-c. and d-c. switching equipment, and switching equipment for two 600-volt d-c. outgoing feeders.

The 26,400-volt line equipment with the exception of the current transformers, and the two 600-volt, d-c. outgoing feeder equipments, were obtained from the Whirlpool distributing station. The 550-kv-a. transformer was purchased from the Canadian General Electric Company. The 550-kw., rotary-converter with a-c. and d-c. switching equipment was obtained from the Montrose distributing station. Power is measured at 440 volts, a graphic wattmeter and watt-hour meter with necessary current and potential transformers being installed.

The building was erected and the electrical equipment installed by the Construction department according to plans issued in June, and work was completed on October 31, 1922.

Sarnia Municipal Station

At the request of Sarnia Hydro-Electric system, a 100-kv-a., 4,000-volt, three-phase, feeder regulator was purchased from the Canadian Westinghouse Company in April, 1922, for installation in its station. Drawings are now ready and installation will be made by the Construction department about December 1, 1922, as delivery of the regulator is promised for the latter part of November.

Salt Block Substation of the Hydro-Electric Power Commission Railways

In August, 1922, the installation of three 600-volt, d.c., outgoing-feeder equipments in the Salt Block substation of the Hydro-Electric Power Commission railways was authorized to replace three lower-capacity equipments owned by the Windsor Hydro-Electric system. These equipments, consisting of switchboard panels, carbon circuit-breakers, ammeters, and knife switches, were obtained from the Whirlpool distributing station and installed by the Windsor Hydro-Electric system, being placed in service on October 15, 1922.

Walkerville Municipal Station

Engineering assistance was given to the Walkerville Hydro-Electric system in connection with the inspection and tests of one 1,000-kv-a., 3-phase, transformer which it had purchased. These tests were completed on July 18, 1922.

Windsor Municipal Station

Engineering assistance was given the Windsor Hydro-Electric system in building an extension to the municipal station, 36 feet wide, 85 feet long and extending 46 feet above grade, as mentioned in the Annual Report of 1921.

In February the building plans and specifications having been completed, were forwarded to the local Commission, who called for tenders for construction.

Tenders were received in March and the contract awarded to Muxlow and Gale, contractors, in April, they undertaking to complete the building in 95 working days. Steady progress was made and the building was practically completed in the time provided by the contract.

In January, 1922, tenders were called for on the electrical equipment for the extension. Contracts for this equipment were awarded in April as follows:—

The Canadian Westinghouse Company was given the contract for the supply and installation of both 26,400-volt and 4,000-volt switching equipment, including 26,400-volt, type-"G.A.3" and 4,000-volt, type-"B-13" oil-breakers, four 100-kv-a. feeder regulators, and the switchboard. The Canadian General Electric Company was given the contract for the 26,400-volt, oxide-film arrester and the 5-kw., battery-charging, motor-generator set. The Moloney Electric Company undertook the contract for two 3,000-kv.-a., 26,400-13,200/2,300-

4,000-volt, three-phase, 25-cycle transformers and three 50-kw., 2,200/220-110-volt, service transformers. The Exide Batteries of Canada, Limited, secured an order for the 60-cell, type-"E7" battery for operating the oil-breakers. The Standard Underground Cable Company undertook the supply of the three-conductor, 250,000 c.m., paper-insulated, lead-covered, 4,000-volt cable and outdoor potheads for the 4,000-volt outgoing feeders.

On account of the destruction of the Moloney Electric Company's factory by fire early in September, it became necessary to cancel the contract for the transformers, and new tenders were called for on these in October. The three 50-kv-a., service transformers were ordered direct by the Windsor Hydro-Electric system from the Canadian Crocker-Wheeler Company. Tenders on the two 3,000-kv-a. transformers are expected early in November, 1922.

As the two new 3,000-kv-a. transformers would not be available for some time the Windsor Hydro-Electric Commission rented two 1,500-kv-a., Canadian Crocker-Wheeler Company transformers from the Commission's Niagara system reserve equipment for use until such time as its own are available.

The Canadian Westinghouse Company are installing the 26,400-volt and the 4,000-volt switching equipment connecting up to the 3,000-kv-a. transformers and making all connections to the outgoing potheads on the 4,000-volt feeders. The layout for the 4,000-volt outgoing feeders (underground) both inside and outside the station was designed by the Engineering department and will be installed by the local Commission.

The lighting, heating, and the transformer, water and oil-piping layouts have been made up by the Engineering department and are being installed by the Construction department. The installation work is progressing favourably and it is expected to get this extension in service about January 1, 1923.

Storehouse

In June, instructions were received to give engineering assistance to the Windsor Hydro-Electric system in the preparation of plans for the erection of a storehouse approximately 80 feet by 42 feet with two storeys and a basement. The plans were issued in August but owing to estimated cost being higher than anticipated it was decided to reduce the length of the building by 20 feet and the plans were revised accordingly. In October the contract was let to Muxlow and Gale for a building 60 feet long. Construction was commenced by the contractor in October. The formal contract was forwarded to the Windsor Hydro-Electric system for signature on October 30, 1922.

Instructions were received in October to purchase on behalf of the Local Commission a two-ton freight elevator for the above storehouse. The lighting and heating layout was made by the Commission's engineer and is so arranged as to be controlled by electrically operated breakers from the municipal station adjacent. Heating units of Hydro-Electric Power Commission make will be used.

Tenders for the installation will be called for and the contract let locally.

YORK TRANSFORMER STATION

As additional transformer capacity was required, it was decided in July to install four of the 5,000-kv-a. transformers purchased from the Canadian General Electric Company for use on the Niagara system. These transformers have been placed on concrete foundations located outdoors to the north of the present station and necessary alterations in building and piping have been made. A 13,200-volt, oil circuit-breaker purchased from the Canadian Westinghouse Company will be installed for the new transformer bank and at the same time the 13,200-volt bus will be changed and larger cable installed. These new transformers will be placed in service during November.

The four 1,250-kv-a. transformers removed from this station will be shipped to Preston transformer station.

To control the two 13,200-volt lines being erected to feed Weston and Woodbridge, two oil circuit-breakers have been purchased from the Canadian Westinghouse Company. It is proposed to have these breakers and the other equipment for the feeders installed as soon as the 1,250-kv-a. transformers are removed from the station.

The three 150-kv-a. transformers, together with switching equipment for two 4,000-volt feeders from Mimico distributing station, are to be moved to York transformer station and installed to supply power to Etobicoke township. The transformers which have recently been repaired by the Operating department have already been placed in the station.

All this work in the York transformer station is being done by the Construction department.

Etobicoke Distributing Station

In June, 1922, authorization was given to change the metering equipment on the Brown's Copper and Brass Rolling Mills feeder in this station as the existing graphic wattmeter and reactive, kilovolt-ampere meter were not suitable for this fluctuating load. They were replaced by a Lincoln graphic wattmeter and a Lincoln reactive, kilovolt-ampere meter. This installation was done by the Operating department and the meters placed in service on July 20, 1922.

In February, 1922, authorization was given to make the necessary changes in the metering connections in this station so that the Goodyear load may be metered separately from that of New Toronto.

This work was done by the Operating department and was completed and placed in service on May 16, 1922.

Weston Municipal Station

At the request of the Weston Water, Light and Power Commission, engineering assistance was given covering the purchase of three 300-kv-a., single-phase transformers to replace the three 100-kv-a. transformers previously in service. The installation work was done by the Construction department and was completed and the transformers placed in service on July 28, 1922.

HAMILTON TRANSFORMER STATION

In January a galvanized-iron storehouse was constructed on the grounds. The plans for the high- and low-tension, switching towers and the switching and control building were started in May, 1922, and completed in August.

The contract for the high- and low-tension switching steel structures was let in June to the Canadian Bridge Company. This steelwork has been received and erected by the Construction department.

In July the Construction department started the necessary excavation for the building and footings and have now constructed the concrete footings for the switching structures, transformers and breakers, also the transfer track for transformers.

In August the contract for the steel framework for the switching and control building was let to the Canadian Bridge Company. This has now been received and partially erected by the Construction department. In September the contract for the concrete and masonry of the switching and control building was let to the Piggott-Healy Construction Company, who have now completed the concrete basement walls.

The necessary water supply for the station was obtained from the city of Hamilton water main on the Beach road. A 6-inch water main was laid from this point into the station by the Construction department.

The following station equipment has been ordered and delivered:—One 50-ton transformer transfer truck from the Herbert Morris Crane and Hoist Company, one 1,000 gallon switch-oil tank and one 4,200-gallon, transformer-oil tank, both from the Toronto Iron Works, one 30-gallon-per-minute oil pump and motor from Darling Brothers, Limited, and steel window sash from Canadian Metal Window and Steel Products.

The following station mechanical equipment has been ordered:—One air compressor having a capacity of 23 cubic feet of free air per minute from the Storey Pump and Equipment Company, two 3,000-gallon-per-minute water pumps from the Northern Foundry and Machine Company, and an oil drying and purifying outfit from William R. Perrin, Limited.

Plans are now under way for water, oil and air piping for transformers and breakers.

Work on the foundations and steel work as outlined in last year's Report, was started during the latter part of June, 1922, and the installation of the electrical equipment begun about September 1. On October 1, the station was tested out for service with one 110,000-volt breaker (non-automatic), one bank of 5,000-kv-a. transformers, two temporary outgoing 13,200-volt feeder equipments, including "GA-3" oil breakers (indoor type, each housed in a small temporary wooden building), and 13,200-volt metering equipment consisting of graphic wattmeter and reactive, volt-ampere meter, current and potential transformers, housed in a small wooden building. The station was placed in service on October 8, 1922. The permanent equipment will be completed and placed in service early in 1923.

Saltfleet Distributing Station

The 400-kv-a., 3-phase, pole-type station mentioned in last year's Report was placed in temporary service on February 14, 1922, and completed by the Construction department on April 7, 1922.

TORONTO POWER COMPANY

A considerable amount of plant inspection and inventory checking of plant equipment has been done in connection with taking over the "plant and works" of the Toronto Power Company under the purchase agreement.

SEVERN SYSTEM

BIG CHUTE GENERATING STATION

The installation of the air compressor, as outlined in last year's Report, was completed and placed in service on April 29, 1922.

Suggested Port Severn Development

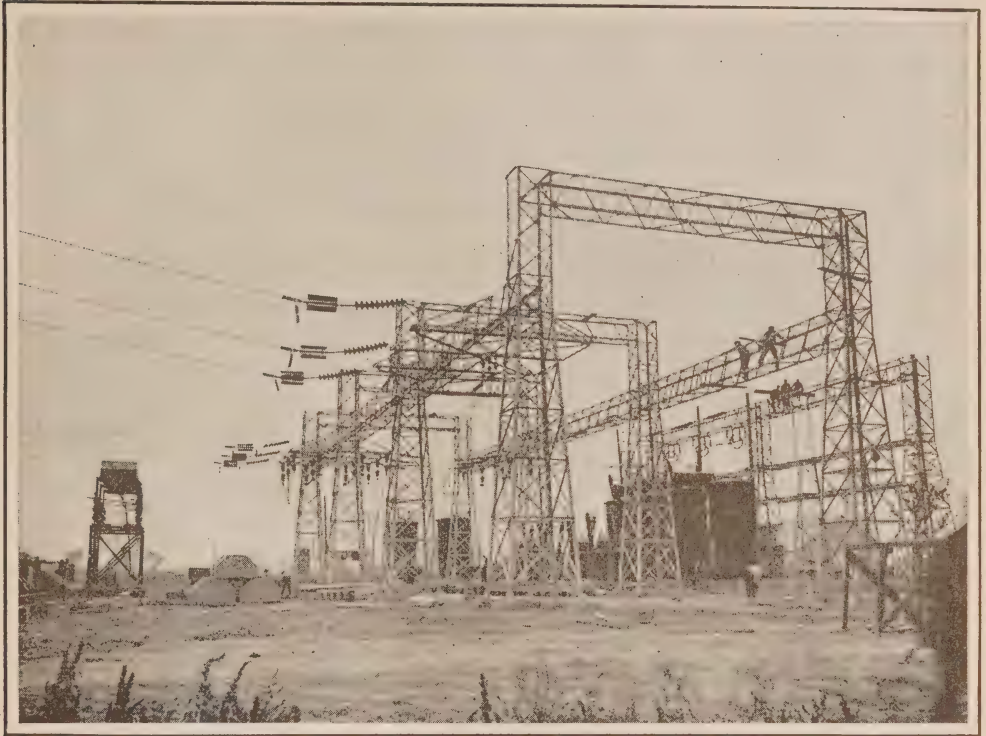
It was decided in October, 1922, to carry on preliminary engineering in connection with the investigation and design of a development at Port Severn on the Severn River to augment the power supply on the Severn system.

Alliston Distributing Station

Instructions were received in May, 1921, to replace the graphic-recording demand-meter on the Alliston feeder in the Alliston distributing station with a graphic wattmeter for more accurate power measurement. This change of meters was made by the Operating department and the new meter placed in service on February 23, 1922.

Collingwood Electric Castings Distributing Station

Instructions were received in April, 1922, covering the purchase of three 300-kv-a., single-phase, 60-cycle transformers and their installation in the original



HAMILTON—NIAGARA SYSTEM
Transformer station from north-east, October 5, 1922



SALTFLEET—NIAGARA SYSTEM
Distributing station, February 14, 1922

Collingwood No. 2 distributing station to serve the Collingwood Electric Castings Company at 2,200 volts. These transformers were purchased from the Moloney Electric Company, on April 8, 1922.

Instructions were issued to the Construction department in April, 1922, and the transformers were installed and placed in service by May 7, 1922.

An inspection was made of one of these transformers which failed in service on July 17. This unit was repaired by the manufacturers and returned to service on September 2.

All switching equipment is owned by the Collingwood Commission.

Midland (G.T.R. Tiffin) Distributing Station

Instructions were received in May, 1922, covering the construction of a 22,000-volt brick distributing station at the Midland G.T.R. Tiffin elevator on a site owned by the Grand Trunk Railway and adjacent to its present steam power house. Plans and specifications covering a brick and concrete building 25 ft. 8 in. by 29 ft. 2 in. and its equipment were prepared and were forwarded to the Construction department, who carried out the work. Work was started on August 1, 1922, and the station placed in service on September 16, 1922.

This station is fed by two incoming 22,000-volt lines tapped from the main trunk lines to Penetang. Each line equipment is complete with electrolytic arrester, disconnecting switches, choke-coils, "GA-3" breaker and two K.9 current-transformers. All equipment with the exception of the current-transformers was obtained from storage at the dismantled Durham Cement Company distributing station. A bank of three 400-kv-a., single-phase, 60-cycle, 22,000-2,300/575-volt, oil-insulated, self-cooled transformers has been installed, these also having been obtained from the Durham Cement Company distributing station. The low-tension equipment is owned by the Grand Trunk Railway, the Commission's equipment with the exception of metering transformers and meters being confined to the new station. All low-tension equipment is installed in the Grand Trunk Railway power house. The metering equipment which is owned by the Commission is installed on a panel in the G.T.R. power house and comprises a graphic wattmeter, graphic-recording, reactive, volt-ampere meter and a switchboard, watthour meter. This panel, which is of blue Vermont marble, is installed at the left of, and lines up with, the G.T.R. switchboard.

No G.T.R. equipment is installed in the Commission's distributing station.

Port McNicoll Distributing Station

Increased transformer capacity being required at the Port McNicoll distributing station, instructions were received in November, 1921, to purchase and install a third 15-kv-a. transformer. A service transformer of this rating was purchased in December, 1921, and instructions issued to the Operating department for its installation.

This work was completed and the bank with three transformers placed in service on December 30, 1921.

EUGENIA SYSTEM

Chesley Distributing Station

Instructions were received in May, 1921, to replace the graphic-recording demand-meter on the Chesley feeder in Chesley distributing station with a graphic wattmeter for more accurate power measurement. This change of meters was made by the Operating department and the new meter placed in service on February 14, 1922.

Dundalk Distributing Station

Instructions were received in May, 1921, to replace the graphic-recording demand-meter on the Dundalk feeder in Dundalk distributing station with a graphic wattmeter for more accurate power measurement. This change of meters was made by the Operating department and the new meter placed in service on February 20, 1922.

Durham Distributing Station

The requirements for power at the John E. Russell Company's plant necessitated the removal of the three 100-kv-a. transformers from Durham distributing station to that point and their replacement with the original bank of three 50-kv-a. transformers. Instructions covering this change were issued to the Construction department on April 19, 1922.

This interchange of transformers was carried out on April 30, 1922, and the new bank placed in service on that date.

Instructions were received in December, 1921, to replace the graphic-demand meter on the Durham feeder with a graphic wattmeter and to install a graphic-recording, reactive, volt-ampere meter on this feeder to operate in conjunction with the graphic wattmeter. This work was carried out by the Operating department and the new metering installation placed in service on March 30, 1922.

Durham Russell Distributing Station

Instructions were received in March, 1922, covering the construction of a 22,000-volt, pole-type station on a site provided by the John E. Russell Company at Durham to supply power to that Company.

Plans were prepared in April, 1922, and forwarded to the Construction department with instructions to carry out this work. Work was started in April and the station completed and placed in service on May 7, 1922.

This station is connected to both high-tension trunk lines running past this property to Mount Forest. Two air-break switches are mounted on this structure and the lines are bussed together on the structure dropping down through choke-coils and fuses to the transformer bank. The three 100-kv-a., outdoor transformers originally installed in Durham distributing station were moved to this station and placed in service. All low-tension equipment is owned by the John E. Russell Company with the exception of metering potential-transformers, graphic wattmeter and recording, reactive, volt-ampere meter, which are the property of the Commission. This equipment is mounted on the customer's panel.

Grand Valley Distributing Station

Instructions were received in May, 1921, authorizing the replacement of the graphic demand-meter on the Arthur feeder in the Grand Valley distributing station with a graphic wattmeter, and also the installation of a graphic-recording, reactive, volt-ampere meter to operate in conjunction with the wattmeter. Prior to the carrying out of this change, superseding instructions were issued in April, 1922, requesting that this work be not proceeded with and authorizing the installation of a metering station at the outskirts of Arthur. This metering station was proceeded with and in May, 1922, the meters in Grand Valley station on this feeder were dismantled and shipped to Durham for service in the Durham Russell distributing station. Work in Grand Valley distributing station was completed on May 23, 1922.

Hanover Distributing Station

The switching station immediately to the rear of the Hanover distributing

station, as outlined in last year's Report, was completed and placed in service on February 11, 1922. The 300-kv-a., 4,000-volt synchronous condenser purchased by the municipality in September, 1921, as mentioned in last year's Report, was also installed by the Construction department and placed in service on February 11, 1922. More adequate telephone equipment was installed during March, 1922.

Kincardine Distributing Station

Work is proceeding on the installation of larger capacity fuses in the incoming 22,000-volt line and smaller ratio current-transformers in the Kincardine feeder at Kincardine distributing station for increased efficiency in the operation of this station. This work should be completed in December, 1922.

Mount Forest Distributing Station

Instructions were received in May, 1921, to replace the graphic-recording demand-meter on the Mount Forest feeder in Mount Forest distributing station with a graphic wattmeter for more accurate power measurement. This change of meters was made by the Operating Department and the new meter placed in service on January 13, 1922.

Orangeville Distributing Station

Instructions were received in May, 1921, to replace the graphic-recording demand-meter on the Orangeville feeder in Orangeville distributing station with a graphic wattmeter for more accurate power measurement. This change of meters was made by the Operating department and the new meter placed in service on January 22, 1922.

Owen Sound Distributing Station

The installation of a wattmeter in Owen Sound station as mentioned in last year's Report to replace the graphic demand-meter was carried out by the Operating department on January 4, 1922, and the new meter was placed in service on that date.

WASDELLS SYSTEM

Greenbank Distributing Station

Instructions were received in May, 1922, covering the erection of a 22,000-volt, 150-kv-a. rural-class station on a site purchased by the Commission at Greenbank to serve the municipalities of Uxbridge and Port Perry, at 4,000 volts. The contract for the transformer was placed with the Canadian General Electric Company in June, and the transformer delivered to Greenbank during September, 1922.

The station is located at the end of the 22,000-volt line from the Wasdells Falls generating station and the high-tension equipment includes choke-coils, fuses and disconnecting switches. The transformer rating is 150-kv-a., three phase, 60-cycle, 22,000-20,900-19,500/2,300-4,000 volts, oil-insulated, self-cooled, outdoor type.

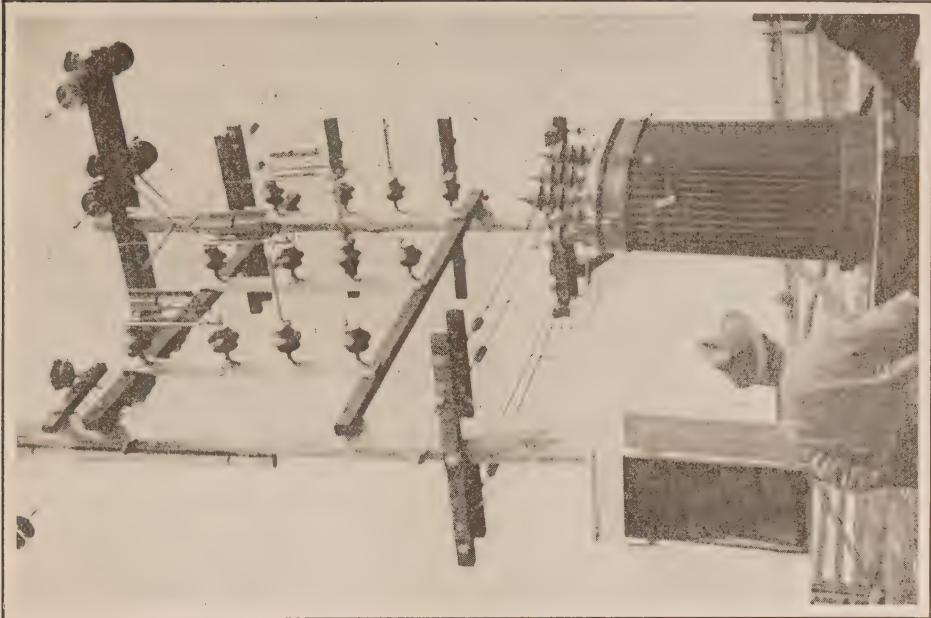
Low-tension equipment includes fuses, cut-outs, standard metering station with an indicating demand-meter and lightning arresters. One low-tension line is fed out of this station and branches some distance from the station to the two municipalities.

Telephone equipment is mounted on the pole immediately in front of the station.

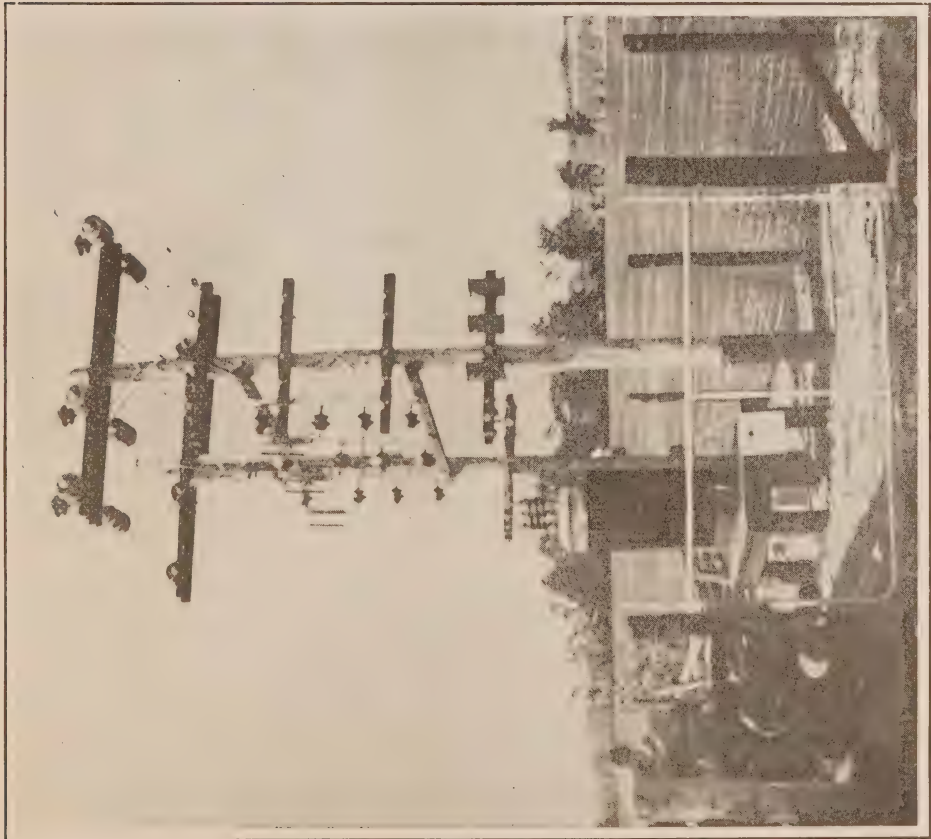
This station was placed in service on September 29, 1922.

MUSKOKA SYSTEM

There were no changes made on this system during the year.



GREENBANK—WASDELLS SYSTEMS
Distributing station, from west, September 29, 1922



GREENBANK—WASDELLS SYSTEM
Distributing station, from east, September 29, 1922

ST. LAWRENCE SYSTEM

Alexandria Distributing Station

The graphic-recording wattmeter and the graphic-recording, reactive, volt-ampere meter at this station were replaced with graphic meters of more suitable type, the latter being placed in service on July 6, 1922.

Brockville Distributing Station

Due to raising the transmission voltage of the St. Lawrence system from 26,400-volts to 44,000-volts, extensive changes were made in the high-voltage apparatus of Brockville distributing station in order to permit of this station being operated at 44,000-volts.

The type-"E," 26,400-volt, oil circuit-breaker was replaced by a type-"G.A.3," 300-ampere, 44,000-volt breaker obtained from Montrose distributing station on the Niagara system. Three new type-"O.B.," 44,000-volt current-transformers were transferred from Cornwall to replace the two 26,400-volt current-transformers. A 44,000-volt, oxide-film lightning-arrester was purchased from the Canadian General Electric Company and was used to replace the existing 26,000-volt electrolytic arrester in this station. The 26,400-volt insulators, bus work, line entrances, etc., were replaced by 44,000-volt equipment. The new 44,000-volt apparatus has been installed in this station in such a manner as to leave room for a future, second 44,000-volt, incoming line.

The installation of the 44,000-volt apparatus was completed and it was placed in service first at 26,400-volts on September 3, 1922. Later, on October 1, the voltage was changed over to 44,000-volts.

Chesterville Distributing Station

Work is under way on the installation of protective equipment on the Chesterville rural-power-district feeder in Chesterville distributing station. This feeder was formerly connected to the Chesterville distribution system but has now been brought into and is fed from the station itself.

Cornwall (Howard Smith Paper Mills Limited) Distributing Station

Due to raising the transmission voltage of the St. Lawrence system from 26,400 volts to 44,000 volts certain changes were made in the high-tension apparatus to permit of this station being operated at the higher voltage. The 26,400-volt, electrolytic lightning-arrester was replaced by a 44,000-volt oxide-film arrester.

A third 46,000-volt current-transformer was purchased and installed with the original two 46,000-volt current-transformers. Ground connections were provided in the station to permit of the grounding of the high-tension lines feeding this station when necessary. This new apparatus was placed in service first at 26,400 volts on September 9, 1922. On October 1, the voltage was raised to 44,000 volts.

Due to additional power requirements, changes and additions are being made to the Howard Smith Paper Mills Limited, 600-volt equipment in Cornwall (Howard Smith Paper Mills Limited) distributing station.

In March, 1922, the Howard Smith Paper Mills Limited purchased from the Canadian Westinghouse Company four new, 600-volt feeder-panels complete with oil circuit-breakers, totalizing metering equipment, meters and relays. In addition the Commission at the request of the Paper Company purchased bus-bar equipment, cables and pipe structure and are at present installing them in this station together with the four new feeder-panels purchased by the Paper Company.

The transformer mains are being changed over so that the new, 600-volt bus, to which the four new feeders are connected, will be fed from the 1,500-kv-a., 3-phase transformer, while the present three feeders will be fed from the 750-kv-a., 3-phase transformer.

It is expected that this work will be completed during December, 1922.

CORNWALL TRANSFORMER STATION

As projected in last year's Report the installation of four 5,000-kv-a. transformers in their permanent pockets in Cornwall transformer station and the removal and re-installation of the original 1,250-kv-a. bank in the temporary station were carried out by the Construction department, the equipment being placed in service on October 1, 1922, in its permanent location. As the original transformer pockets were to be used for the new transformers, it was necessary to install and place the 5,000-kv-a., transformer bank in temporary service outdoors while the 1,250-kv-a. bank was removed to the temporary station. Afterwards service was changed back to the original transformers and it was then possible to move the new transformers into their permanent pockets in the station.

Building changes necessary were carried out under instructions issued on March 10, while the new transformers were in service outdoors.

The capacity of the 15-ton crane was increased to permit of lifting the 5,000-kv-a. transformer by stiffening the bridge beams with channel iron and purchasing a second identical trolley to operate in conjunction with the present one.

In April a second 30-ton, transformer transfer truck was purchased and instructions were issued for an extension to the transformer truck runway to permit of the interchange of the larger transformers within the station.

A 3,300-gallon oil-storage tank was purchased in May, 1922, from the Toronto Iron Works along with a Canadian Fairbanks Morse No. 4, rotary, geared, motor-driven oil-pump ordered in August and installed in the basement of the station. Plans were prepared and instructions issued to the Construction department during May, covering all changes and additions to the oil and water piping and the installation of the oil tank which was shipped to the site in June.

The four 750-kv-a., 25-cycle transformers on loan from the Niagara system were moved outside the temporary station and they have been adequately protected from the weather. They are being stored at this point until required elsewhere.

Instructions were received in March, 1922, covering changes in the Cornwall station to permit of the operation of the St. Lawrence system at 44,000 volts. Two 44,000-volt, oxide-film arresters were purchased in May, 1922, and installed on the two 44,000-volt, outgoing, system lines, replacing the 26,400-volt, electrolytic arresters. This work was completed and the station voltage changed on October 1, 1922.

Eugene Phillips Electrical Works Limited, Brockville

Metering equipment, consisting of one graphic-recording wattmeter and one graphic-recording, reactive, volt-ampere meter together with one watthour meter was installed in the Eugene Phillips Company's substation at Brockville to measure the power being supplied to its new plant.

MORRISBURG TRANSFORMER STATION

A new outdoor station was erected at Morrisburg to transform power from 44,000 volts to 26,400 volts for use in the district directly north of that town. Two outdoor, combination, switching sets, each consisting of a three-pole, 200-ampere, air-break switch, choke-coils, lightning-arresters and fuses, both sets

being suitable for 44,000-volt service, were purchased from the Monarch Electric Company. These sets were erected on a pole structure which was constructed for a station which would accommodate two three-phase, 300-kv-a transformers. One outdoor 300-kv-a., 60-cycle, 3-phase, 44,000Y/26,400 Δ -volt transformer with spare parts was purchased from the Packard Electric Company and installed. The station was placed in service on October 1, 1922.

Prescott Distributing Station

This station which was formerly supplied with power at 26,400 volts was equipped during the year for operation at 44,000 volts. One outdoor, combination, switching set, consisting of a three-pole, 200-ampere, air-break switch, choke-coils, lightning-arresters and fuses for 44,000-volt service was purchased from the Monarch Electric Company. This equipment was erected on a four-pole structure located directly in front of the high-voltage entrances of the station building. One standard, outdoor, 300-kv-a., 60-cycle, 3-phase, 44,000-26,000/4,160-2,400-600-volt transformer was purchased from the Packard Electric Company and installed at the pole structure. The 2,400-volt feeders were rearranged and one new feeder circuit for the Prescott Rural service was added. The remodelled station was placed in service on October 1, 1922.

RIDEAU SYSTEM

Grenville Crushed Rock Company, Deeks

Metering equipment consisting of one graphic-recording wattmeter and one graphic-recording, reactive, volt-ampere meter was installed in the Grenville Crushed Rock Company's substation at Deeks to measure the power being supplied to its plant. This equipment was placed in service on June 23, 1922.

HIGH FALLS GENERATING STATION

Flange pulleys were installed on the 25-kw. exciters to prevent the driving belt slipping off.

Operator's House

During the year a well was drilled for the supply of drinking water for the operator's house and material was supplied for fencing in a garden and building an ice house, the work being done by the operators.

Kemptville Distributing Station

This station, which was fully described in last year's Report, was placed in service on November 24, 1921.

Perth Distributing Station

Arrangements were made with the Bell Telephone Company at Perth distributing station for the installation of a special switchboard which would permit the Commission's telephone system to be temporarily connected to the Bell system at times when it was necessary to use "long distance." This particular equipment was actually installed in the municipal pumping station which is just alongside the distributing station so as to be more convenient for the operators.

THUNDER BAY SYSTEM

NIPIGON GENERATING STATION

During the earlier part of the year several details required to complete the station were carried out, such as installation of hatch covers, painting of floors, and installation of end-wall fire protection.

In June an air compressor unit was purchased from the Canadian Ingersoll Rand Company and instructions were subsequently issued to the Operating department to install same.

Operators' Houses

During the year purchase were made of pumps and equipment for supplying the houses and station with water for domestic use, also for fire fighting. The pumps, tanks, etc., were located in the basement of the generating station and the work of installation, including piping to the houses, was carried out.

The fire pump was also connected up to the supply pipe to the construction camps and to the end wall sprinkler line and stand pipe.

The work of erecting the fourth detached house referred to in last year's Report was not commenced until September, 1922. This house is now being erected and will be completed during the winter.

OTTAWA SYSTEM

Owing to the growth of load in Ottawa the municipal authorities installed an additional feeder. An extension to the Commission's metering equipment was thus necessitated to totalize the load on the system. Work is in hand on this extension.

CENTRAL ONTARIO AND TRENT SYSTEM

In the 1921 Report it was noted that the work of grounding the neutrals of the generators was under way. This work has not been proceeded with owing to complications in the switching equipment.

Auburn Switching Station

The relay protection in Auburn switching station which is one of the loop stations in the 44,000-volt lines, required alteration to conform to a change in the system protective equipment for sequence of breaker operation during trouble. This work was undertaken by the Operating department and completed during March, 1922. The six 80- to 5-ampere current-transformers in the lines to Healey Falls and Port Hope were removed and replaced with new current-transformers of the same type of 150- to 5-ampere ratio. Reverse-power relays were already installed in the line to Healey Falls and it was only necessary to install a ground relay at this point. New reverse-power and ground relays were purchased for the line to Port Hope and installed.

Belleville Service Building

The 300-kv. testing transformer and auxiliary equipment, which was formerly installed in the Sidney Terminal station, was transferred during the year to the service building in Belleville, as this is a very much more convenient location for this equipment.

Belleville Lehigh Cement Company Distributing Station

Additional metering, consisting of a polyphase wattmeter with a volt-ampere demand-transformer, is being installed.

Belleville Switching Station

Ammeters were installed on each phase of the four high-tension lines in Belleville switching station. This work was completed and placed in service on June 26, 1922.

To improve the relay protection of the 44,000-volt lines in the loop stations of the Central Ontario system, a new system of relays and instrument trans-

formers was installed in the Belleville switching station by the Operating department and placed in service on June 26, 1922. The two 120-60/5-ampere current-transformers were removed from the bus-tie switch and installed in conjunction with identical transformers in the lines to Sidney and Healey Falls to complete a three-unit bank in these lines.

Six unidirectional relays and two ground relays were purchased and installed in the two loop lines. Inverse definite-time, overload relays and ground relays were also installed on the Belleville tap and on the lines to the Belleville Cement Company and the Lehigh Cement Company.

Brighton Distributing Station

The metering equipment in Brighton station is being supplemented by the installation of a Lincoln demand-meter.

CAMPBELLFORD GENERATING STATION (DAM NO. 11)

This station was affected by the requirements for more adequate relay protection in the loop stations on the 44,000-volt lines of the Central Ontario system. One 160-80/5-ampere transformer was purchased and installed in the line to Healey Falls to complete a bank of three units. Unidirectional relays and a ground relay were installed in this line. No other equipment was affected.

This work was completed by the Operating department on August 18, 1922.

Chemical Products Company, Limited

Adequate metering equipment, consisting of graphic meters, was required in this station owing to the increase in load. This work was completed during November, 1921.

Cobourg Distributing Station

On account of the increased load at Cobourg, one of the 300-kv-a. transformers was replaced by a 750-kv-a. unit.

Additional heating equipment was installed in order to overcome trouble with the water piping freezing during winter.

It was found advisable to provide a garage for the patrolman located at Cobourg.

Colborne Distributing Station

The electrolytic lightning arrester was replaced by one of a water barrel type. This was placed in service during October, 1922.

FENELON FALLS GENERATING STATION

In order to supply general power house and cottage lightning a service transformer was installed in the generating station. This work was placed in service during December, 1921.

Frankford Canning Company

Lighting and power metering equipment were installed on this company's property. The installation was completed during October, 1922.

HEALEY FALLS GENERATING STATION

Inadequate relay protection in the loop stations on the 44,000-volt lines of the Central Ontario system necessitated the installation of a new system of protective equipment to limit the number of interruptions of stations on the loop to a minimum. Three current-transformers of 150-300/5-ampere ratio were purchased for Healey Falls generating station and these were installed in the 44,000-volt line to Auburn. The two current-transformers in this line were installed in the lines to Sidney and Campbellford, making up a bank of three



RANNEY FALLS DEVELOPMENT—CENTRAL ONTARIO AND TRENT SYSTEM
Generating station progress: South elevation, June 30, 1922



RANNEY FALLS DEVELOPMENT—CENTRAL ONTARIO AND TRENT SYSTEM
Generating station progress: East elevation, June 30, 1922

transformers in each line. Unidirectional and ground relays were installed in the three lines. This work was completed during September, 1922.

As this is the key station in the three loops, the neutrals of the three transformer banks were solidly grounded, the neutral being brought through the cover by means of a copper stud. The neutral at this station is grounded under all conditions of operation. This work was completed by the Operating department during September, 1922.

Marmora Distributing Station

Due to high maintenance charges and the small load on this station, the graphic meters installed at this point were not satisfactory and were replaced with a demand-meter with a volt-ampere demand-transformer. This was placed in service during January, 1922.

Newcastle Distributing Station

The electrolytic lightning arrester was replaced by one of the water-barrel type. This change was made during October, 1922.

Norwood Distributing Station

Due to difficulties in keeping the graphic meters in this station operating satisfactorily, they were removed and replaced by demand-meters with volt-ampere demand-transformers, one of each of the above being installed on the feeder supplying Norwood and Havelock. They were placed in service during January, 1922.

Peterboro Distributing Station

Revised estimates for the new substation contemplated by the Peterboro Public Utility Commission were submitted during the year for the consideration of the commissioners.

Port Hope Switching Station

Ammeters were installed in this station, on the lines to Trenton and Peterboro. The work was completed during June, 1922.

A new system of relays and instrument transformers was purchased and installed in the Port Hope switching station and placed in service on April 5, 1922. The existing line current-transformers and also those on the 44,000-volt line to Oshawa were replaced with nine 150-300/5-ampere current-transformers, three being installed in each line. Unidirectional and ground relays were installed in the lines to Auburn and Sidney stations, while inverse definite time overload relays and a ground relay were installed in the Oshawa feeder. The removed equipment was used at other points.

This work was undertaken by the Operating department.

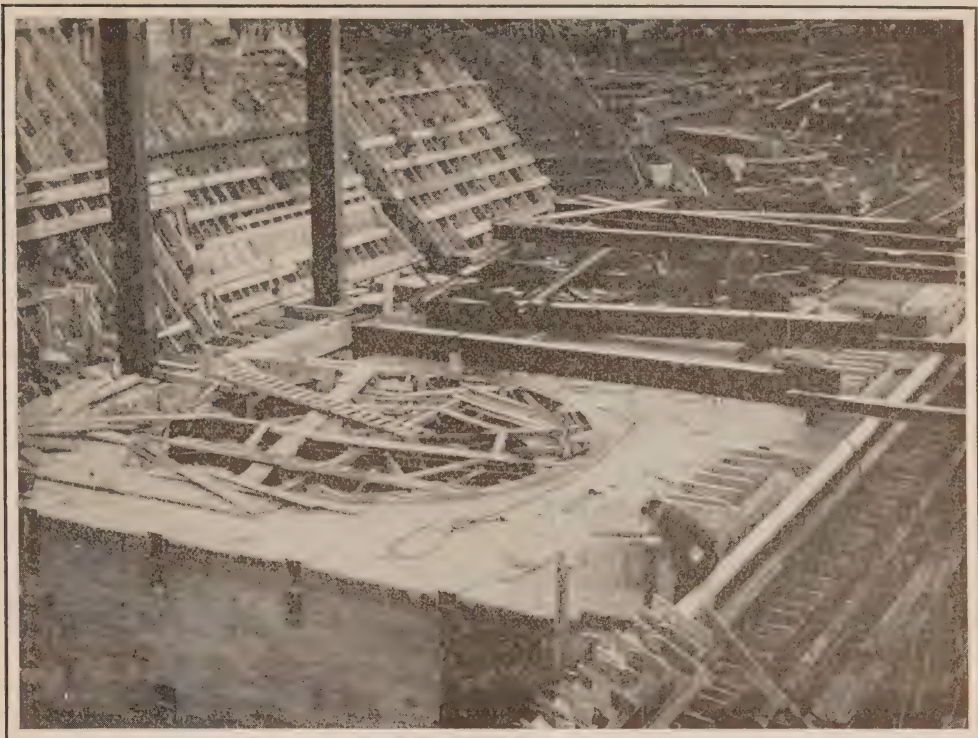
RANNEY FALLS GENERATING STATION

Progress

During the year the building plans were completed and plans for oil, water and air systems were undertaken and completed. Purchases were made of water and oil pumps, lubricating-oil filter, oil tank and air compressor. Instructions were issued to the Construction department for the installation of all the above material and numerous inspections were made of the work.

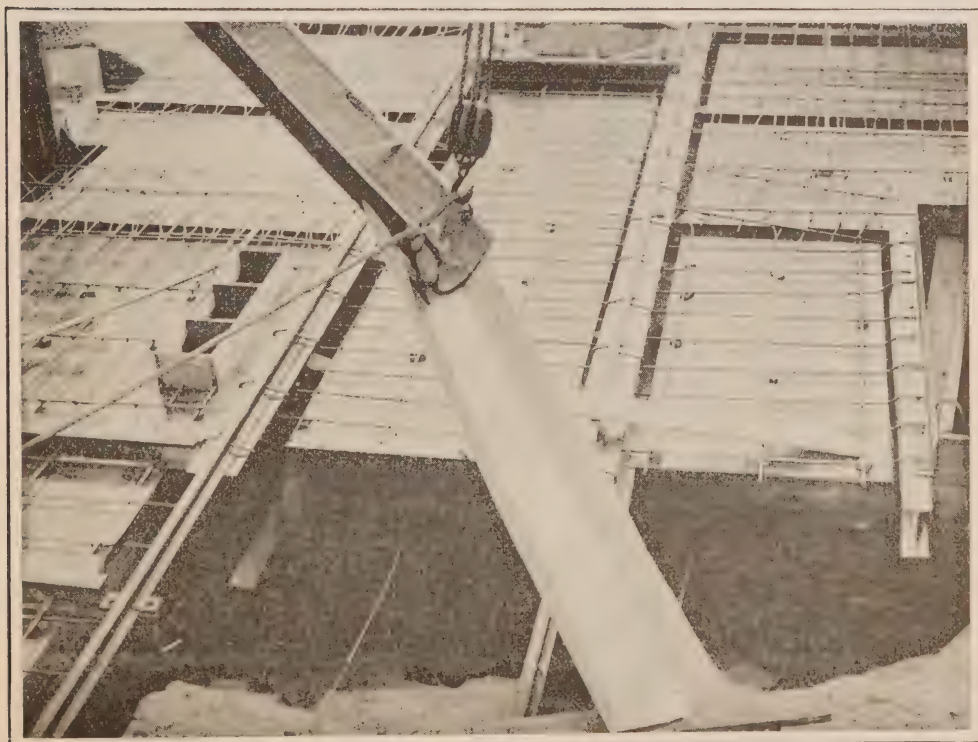
In the endeavour to have this station ready for service for the autumn load construction work was carried on through the winter and the following is an outline of the progress made.

Steel work erection was started on December 1, 1921, and completed on January 21, 1922.



RANNEY FALLS DEVELOPMENT—CENTRAL ONTARIO AND TRENT SYSTEM

Generating station progress: Pouring No. 1 supply pipe and erection of generator room columns.
December 1, 1921



RANNEY FALLS DEVELOPMENT—CENTRAL ONTARIO AND TRENT SYSTEM

Generating station progress: Transformer wing main floor reinforcing. February 1, 1922

Stone work commenced during January, 1922, and was completed on May 31, 1922.

The generator-room crane was erected on February 8, 1922.

The gate-house crane was erected on February 11, 1922.

The concrete-switch-structure was completed on May 13, 1922.

The roof was completed on June 17, 1922.

Generator erection began on April 8, 1922, and the first unit was placed in service on August 22, 1922, and the second on September 5, 1922. At the present time power is supplied from this station to the Central Ontario System net-work over the Healey Falls—Sidney, 44,000-volt line only. Provision has been made also to tie into the Campbellford-Stirling, 44,000-volt line but this line has not as yet been extended to the station. No low-tension feeders have been installed although provision has been made for them.

In general, the entire building construction and installation of all the equipment with the exception of the ventilating system for the control room were completed by the end of October, 1922.

A full description of this plant with illustrations follows.

Building Superstructure

The superstructure which measures 106 feet by 85 feet including the generator room, the switch-rooms, control-room and gate house is constructed of a structural steel frame with reinforced concrete floor and roof slabs and with walls of concrete and stone masonry.

The base and plinth up to the top of the sills of the large semi-circular-arched windows is of concrete with rubbed finish while above the sills the walls are of broken-coursed, squared-stone masonry pointed in chocolate-coloured mortar, the interior of the walls except in the gate house being lined with three-inch, hollow-tile plastered. The inside of exterior walls of the gate house has the plaster applied to the stonework. The walls are surmounted by a heavy concrete coping.

The choice of material for constructing the walls was made on account of the close proximity of blue gray limestone, the greater part of which was obtained from the tailrace excavation dump.

The concrete roof slab is covered by tarred felt and gravel roofing with metal flashing.

The interior walls are built of concrete or hollow tile, the concrete walls being constructed to support equipment. The interior tile walls are plastered on both sides.

Crane Service

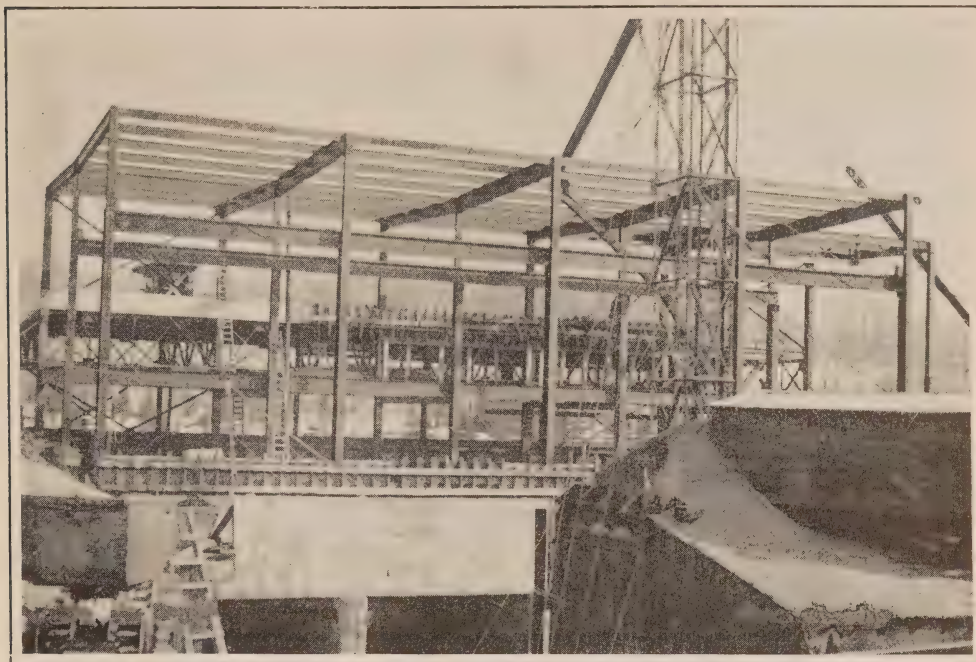
The generator room is served by a 35-ton, electrically-operated, overhead, travelling crane with a 10-ton auxiliary hook.

The gate house is served by a 7-ton overhead crane with motor-driven hoist and hand-operated trolley and bridge.

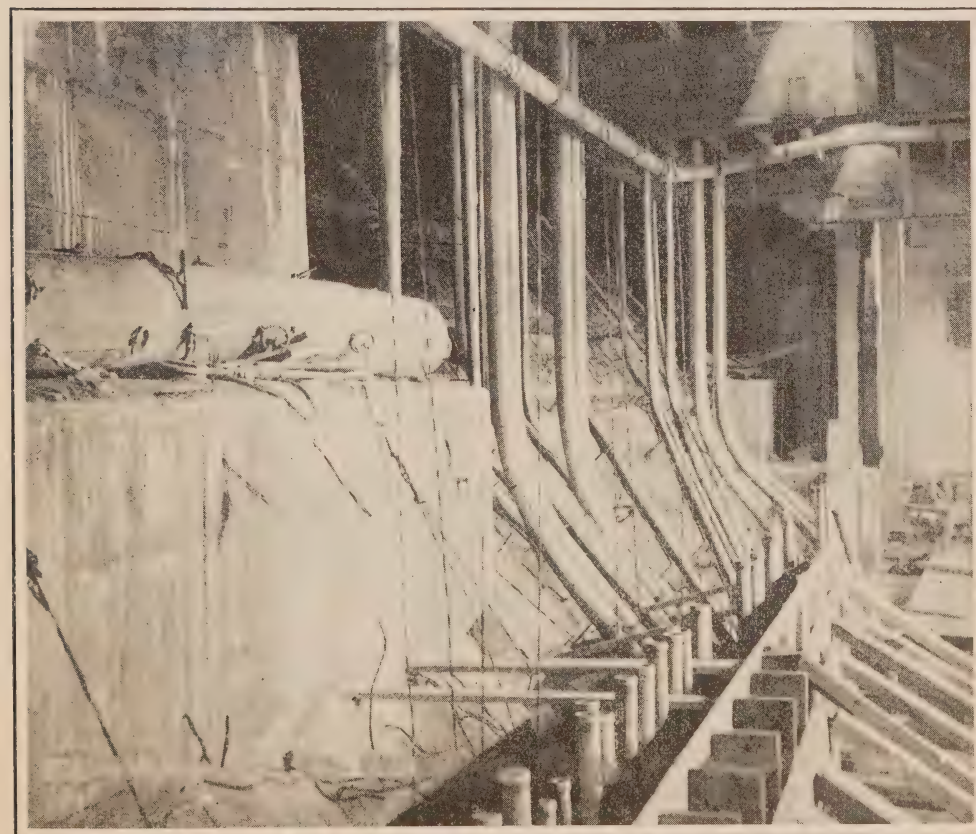
Alternating-current motors are used on these cranes.

Generators

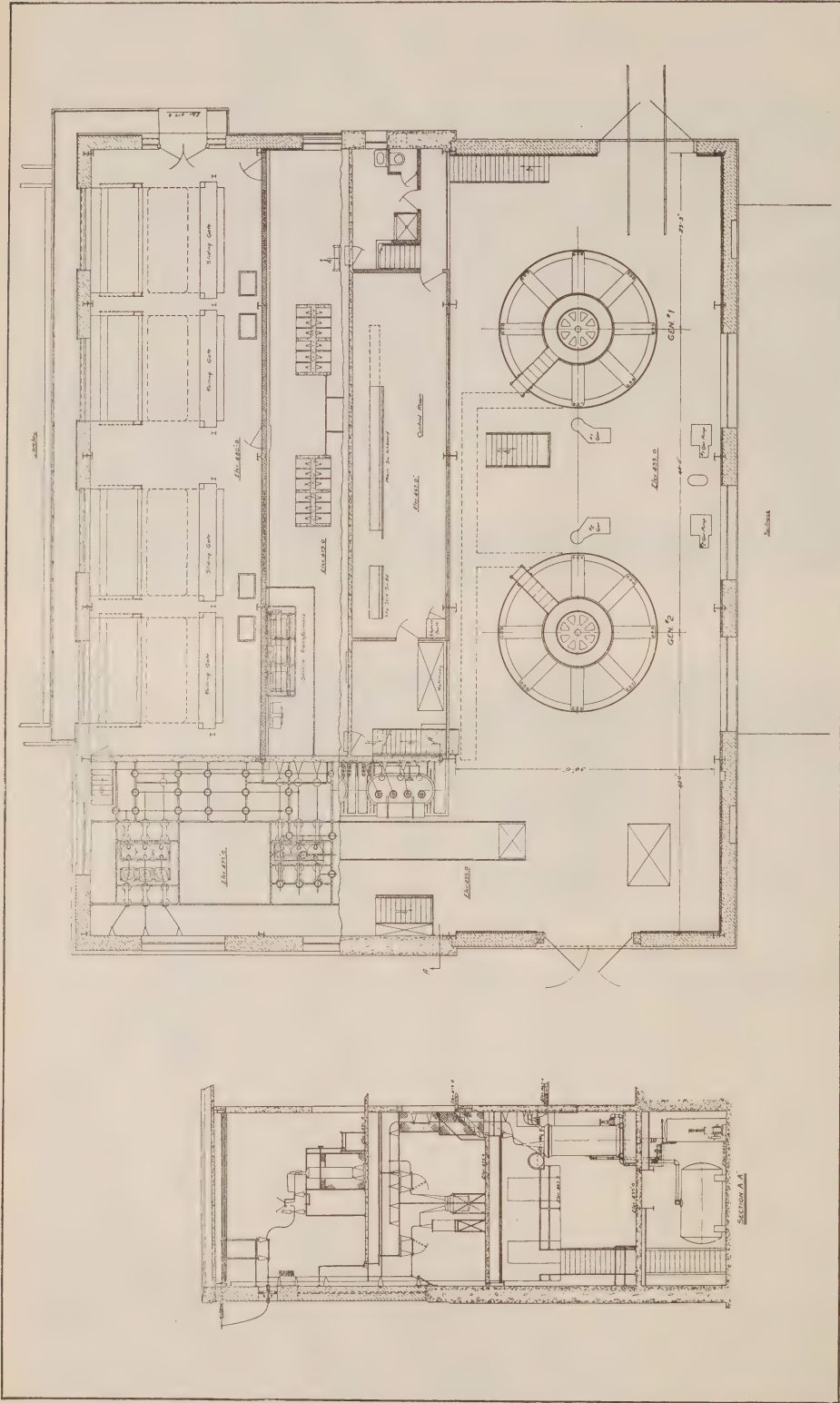
The installation consists of two vertical-shaft units located on 40-foot centres. They were built and installed by the Canadian General Electric Company. The machines are normally rated at 4,500-kv-a., 3-phase, 60-cycle, 6,600-volt, 120 revolutions-per-minute, at 80 per cent. power factor with 40°C ambient air temperature, but they are capable of carrying 5,300-kv-a., at 80 per cent. power factor continuously with cooling air at an ambient temperature of 15 degrees centigrade. The overall diameter of the stator is 20 feet 9 inches and that of the rotor over the pole faces 17 feet 9½ inches. The stator frame is 3 feet 8 inches



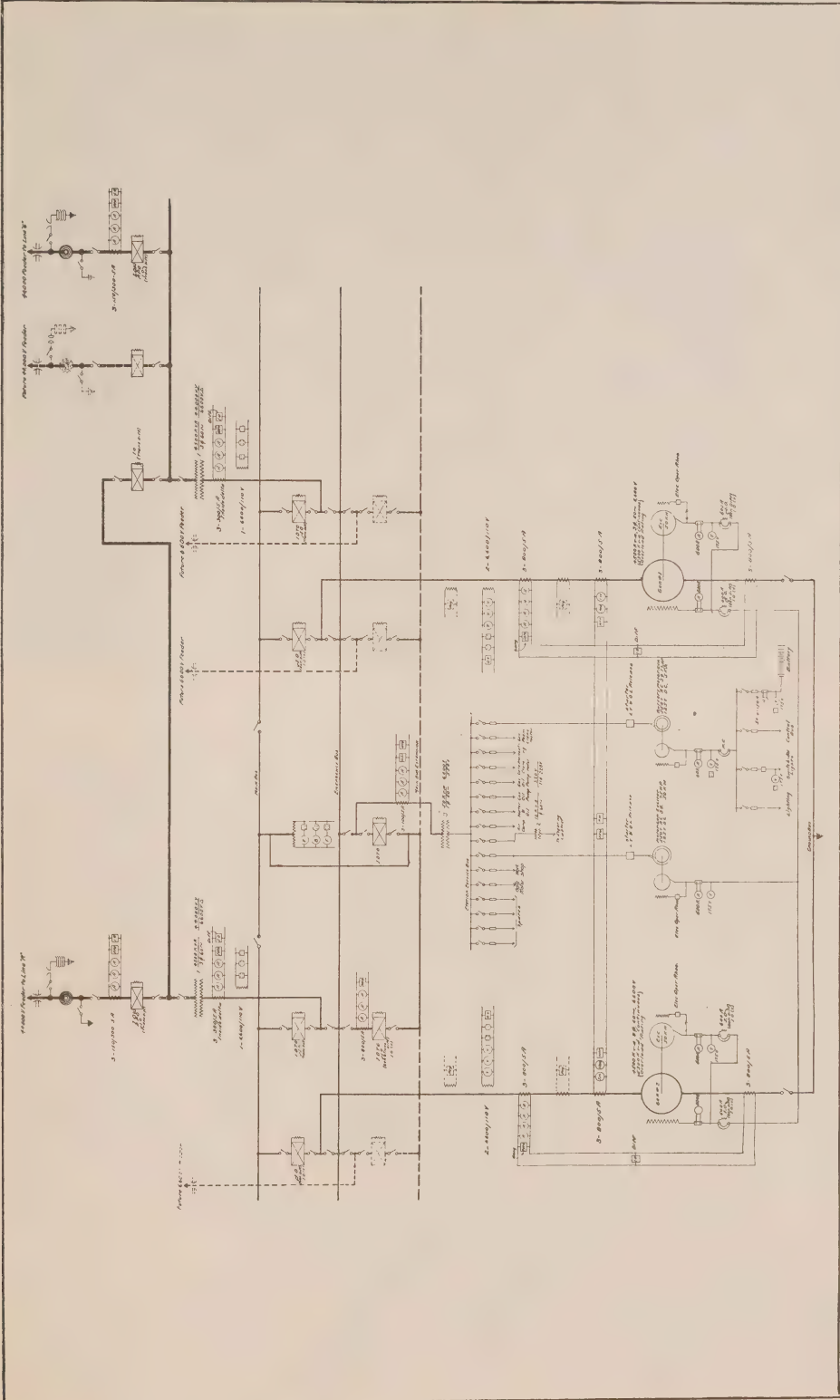
RANNEY FALLS DEVELOPMENT—CENTRAL ONTARIO AND TRENT SYSTEM
Generating station progress: Superstructure steel work. January 17, 1922



RANNEY FALLS DEVELOPMENT—CENTRAL ONTARIO AND TRENT SYSTEM
Generating station progress: Conduit installation on control-room floor. February 21, 1922



CENTRAL ONTARIO AND TRENT SYSTEM—RANNEY FALLS DEVELOPMENT
Plan of Generating Station



CENTRAL ONTARIO AND TRENT SYSTEM—RANNEY FALLS DEVELOPMENT
Diagram of Connections

high and the overall height of the machine above the main floor level to the top of exciter is 13 feet 11 inches. The shaft extends 5 feet below floor level where it is bolted through a flanged coupling to the turbine shaft. The rotor is so designed that no fan blades are required to force cooling air (30,000 cu. ft. per min.) through the stator laminations and windings. After passing through the generator this air will be re-circulated during winter time for heating the station. In summer, air will be taken directly from outside the station and exhausted into the generator room and passed out through the monitor on the generator-room roof as well as through the generator-room windows.

The rotor is made of cast steel all cast in one piece and has a suitable rim for the application of brake shoes. It was subjected to overspeed tests before shipment from the factory.

The stator frame is of cast iron in two sections and the upper bearing bracket is also made in two sections but of cast steel. Special leveling and adjusting screws were put in the base and lower bracket and similar ones were placed in the arms of the upper bracket for raising and lowering the complete rotor and runner and are also used when dismantling the thrust bearing. The armature coils have mica tape insulation.

The thrust bearing supplied with each generator is the standard General Electric spring type. It is capable of carrying a load of 190,000 pounds which takes care of the weight of rotor and total downward thrust due to turbine. It is equipped with an overflow and oil will be circulated to it from the oiling system installed in the station. A sight flow indicator is placed in the oil supply pipe. These bearings are also equipped with water-cooling coils to remove the heat from the oil, and a Bristol recording thermometer is mounted on each generator stator frame to record the bearing temperatures.

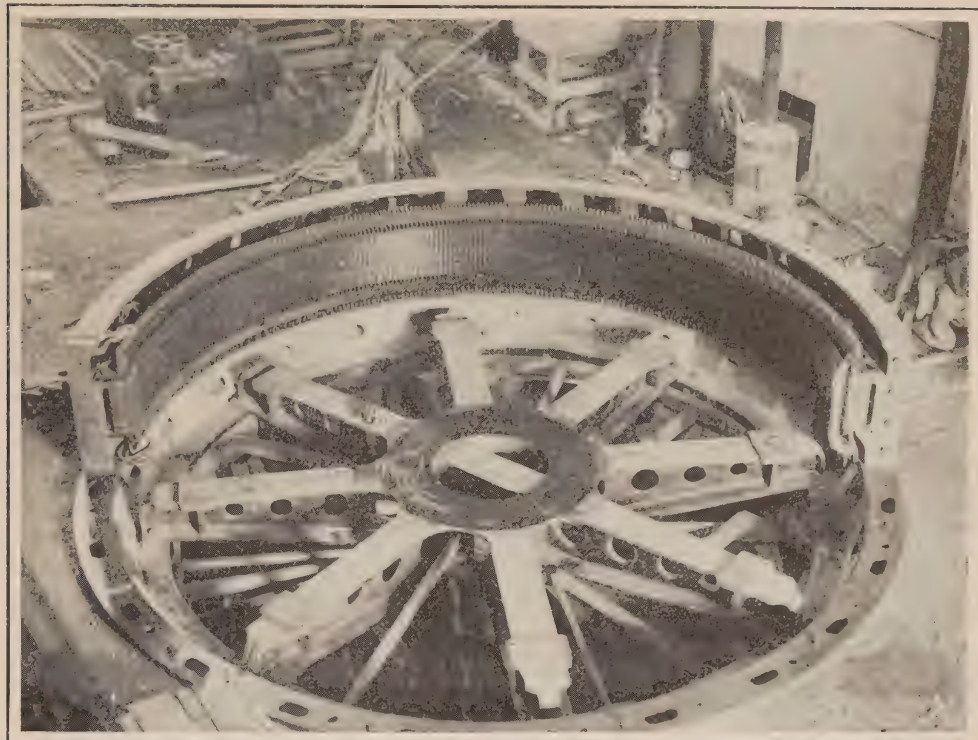
These units are each equipped with an upper and lower guide bearing. Independent pipes with sight flow indicators control the oil feed and overflows from these bearings.

Special fire fighting apparatus has been provided on each machine consisting of pipe rings located around the top and bottom end connections of the stator windings provided with small nozzles, placed approximately every 15 inches. These nozzles are set at an angle such that when they come into action the end connections are covered with a spray of water. The control of the water to these pipes is located in the switchboard room and the operator has first to make a flexible hose connection and then turn on the valve.

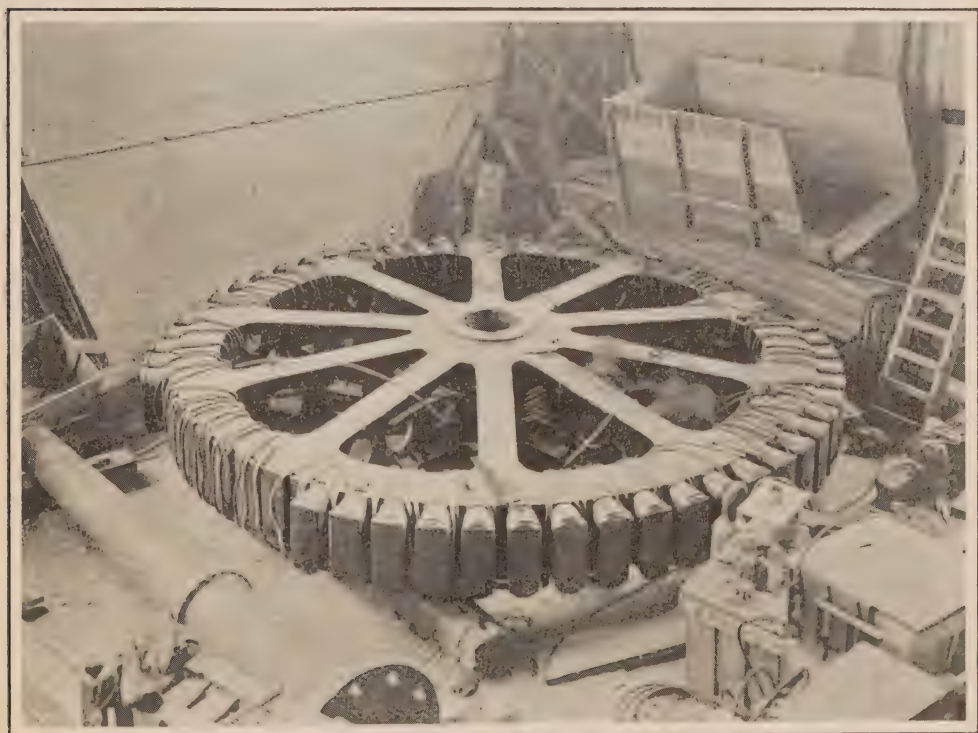
The units are also equipped with air brakes supported on the lower bracket arm. Controls for these are in duplicate, one located beside the governors on the main floor and the other in the switchboard room. An electric alarm is provided to give warning in the event of the air pressure being low.

The generators are star connected. The neutral and main leads are carried through fibre conduit to a point approximately 15 feet from the generator, where the main leads are bussed, and the neutral leads are run through current transformers and bussed. Two parallel, varnished-cambric, lead-covered cables carry the power from this point to the bus in the switch structure. There is a disconnecting switch placed at this point so that the neutral of either machine may be dead grounded to the station ground bus.

Differential protection has been provided consisting of three single-pole, 1/2-1½ ampere relays (induction type) which in case of trouble in the generator or its main cables, will open the generator main breaker or the emergency-bus feeder-switch if it is being used as a generator breaker, and both the field switches, one from the direct-connected exciter and the other from the motor-driven exciter.



RANNEY FALLS DEVELOPMENT—CENTRAL ONTARIO AND TRENT SYSTEM
Generating station progress: Setting first half of No. 2 generator stator. April 4, 1922



RANNEY FALLS DEVELOPMENT—CENTRAL ONTARIO AND TRENT SYSTEM
Generating station progress: No. 1 generator spider wound for heating electrically prior to shrinking on shaft. July 1, 1922

The overvoltage protection functions in a similar manner to the differential, tripping out the same breakers. Overload protection has also been installed to give warning by ringing a gong in case of an overload on the unit. A fourth ammeter has been installed and is connected in the neutral of the current transformers where it will indicate when the circuit is grounded and the extent of the ground.

The output of each generator is indicated by an indicating wattmeter and reactive, volt-ampere meter (2,500-0-7,500 scale) and is integrated on a watthour meter. The output of the two units is totalized on recording wattmeters and reactive, volt-ampere meters.

Twelve thermocouples were distributed throughout the stator winding for taking the internal temperatures. A number of these are located on the iron and others in various places along the slot between the coils.

The complete generator was assembled and tested in the shop.

Excitation

Each 4,500-kv-a. generator is equipped with a 50-kw., 125-volt, shunt-wound, direct-connected exciter, the armature being carried on a short shaft which is bolted to the top of the generator shaft. A spare 50-kw., shunt-wound, commutating-pole, 75-horsepower, motor-generator, exciter set has been provided and can be used for either of the units. There is capacity in each exciter for the excitation of one generator only, and they are suitable for parallel operation, and for use with automatic voltage-regulators. The field breakers for the generators are located on the main floor and the exciter and field leads were made just as short as it was possible and are lead-covered, single-conductor cables. Two field breakers are provided for each generator, one controlling the excitation from the direct-connected exciter and one from the spare motor-generator exciter.

The only rheostats used are placed in the exciter fields. These are located directly below the field switches and are solenoid operated.

Transformers

The main step-up transformers consist of two 6,600/44,000-volt, 3-phase, 4,500-kv-a., 60-cycle, core-type water-cooled units which were built by the Canadian General Electric Company and installed by the Construction department. They are connected delta on the low voltage (6,600-volt) and star on the high voltage (44,000 volts). Taps are provided so that voltages of 42,000, 46,000 and 48,000 may be obtained and the neutral of the high-voltage winding has been brought out through the cover. They are equipped with oil expansion tanks which are mounted on the main tank. Current-transformers are located inside the delta to provide for differential protection, the secondary leads of which have been brought out through the cover in separate bushings. The cooling coils are self draining. An oil tank with capacity sufficient to take the oil of one unit has been installed in the basement and is piped to the transformers.

These units are rated at 40 degrees Centigrade rise and have a 125 per cent. continuous full load rating at a 55 degrees Centigrade rise. The tanks are boiler plate and are oval shape. Each unit is equipped with an electric-alarm thermometer, sight-flow water-indicator, oil gauge glasses on both the main and expansion tank and an oil sampling valve.

The transformers are located on the generator floor, a transfer truck having been provided so that these units can be readily placed under the generator room crane. They weigh approximately 17 tons each. The high-voltage side of the transformers connect direct to the bus through disconnecting switches.

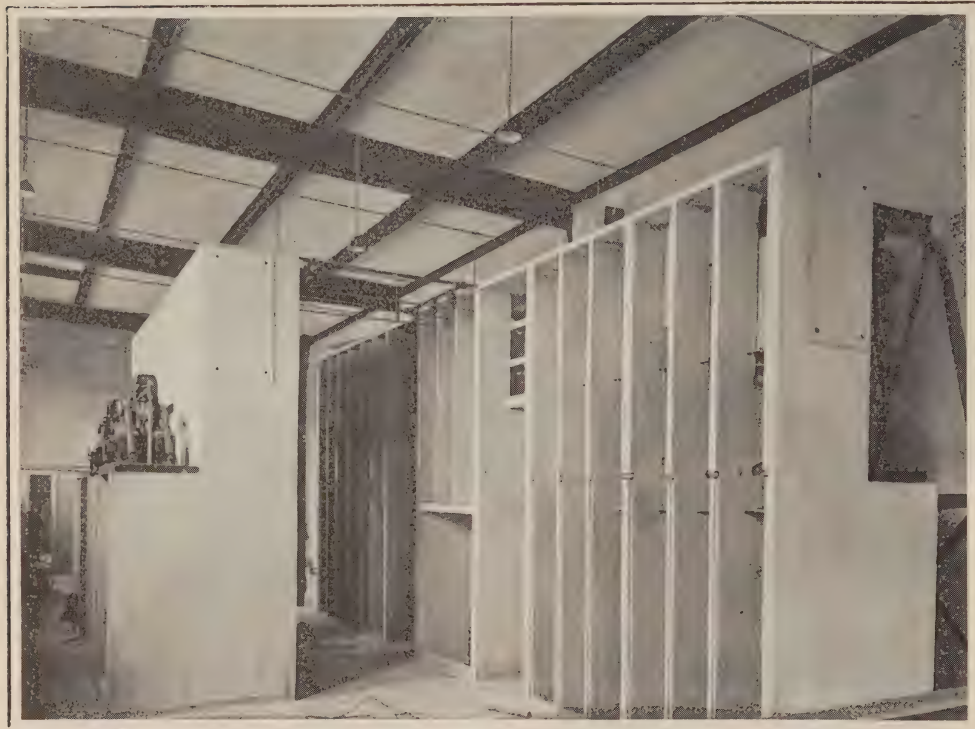
The differential protection for these units requires only the current transformers, noted above, that have been placed inside the delta and one single-pole,



RANNEY FALLS DEVELOPMENT—CENTRAL ONTARIO AND TRENT SYSTEM
Generating station equipment: Control-room switchboard. July 1, 1922

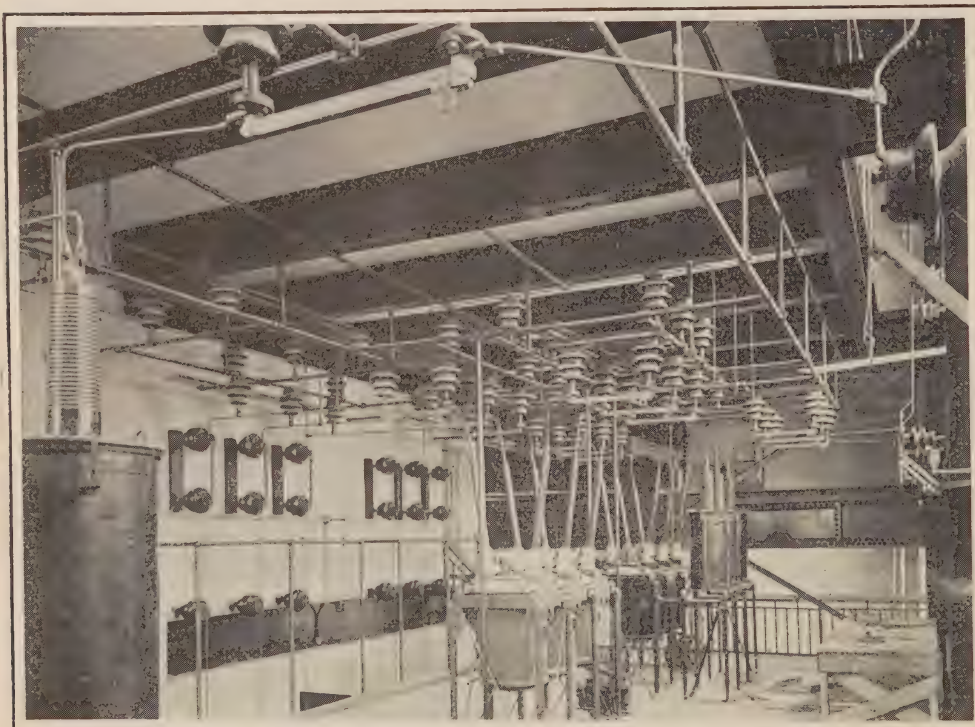


RANNEY FALLS DEVELOPMENT—CENTRAL ONTARIO AND TRENT SYSTEM
Generating station equipment: Generators from south end of room. June 30, 1922



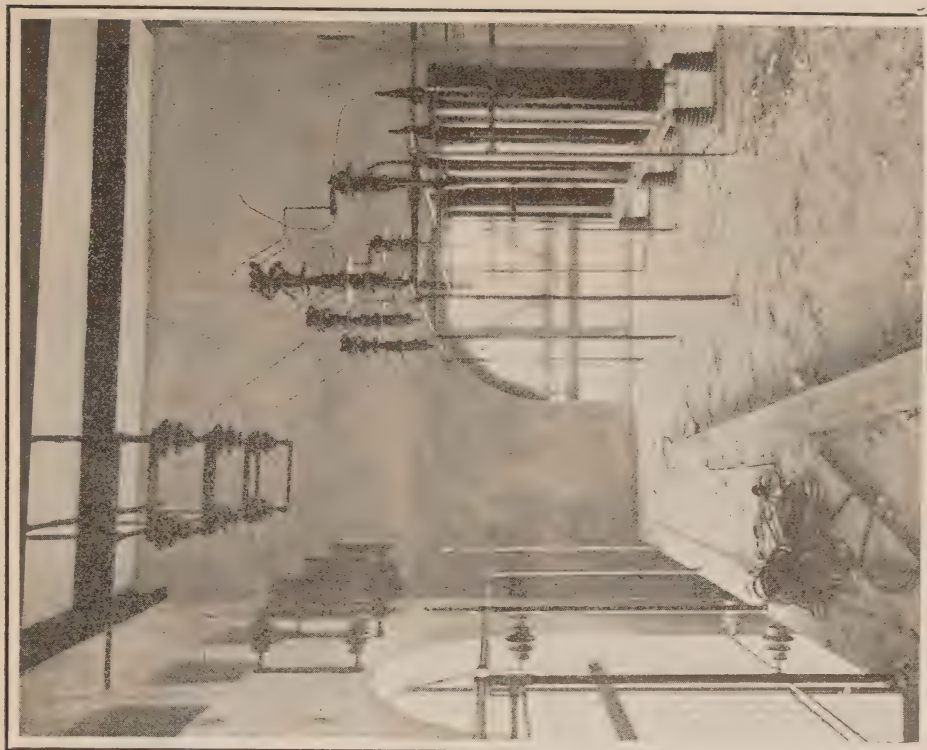
RANNEY FALLS DEVELOPMENT—CENTRAL ONTARIO AND TRENT SYSTEM

Generating station equipment: Low-voltage (6,600 volts) disconnecting-switches. June 30, 1922

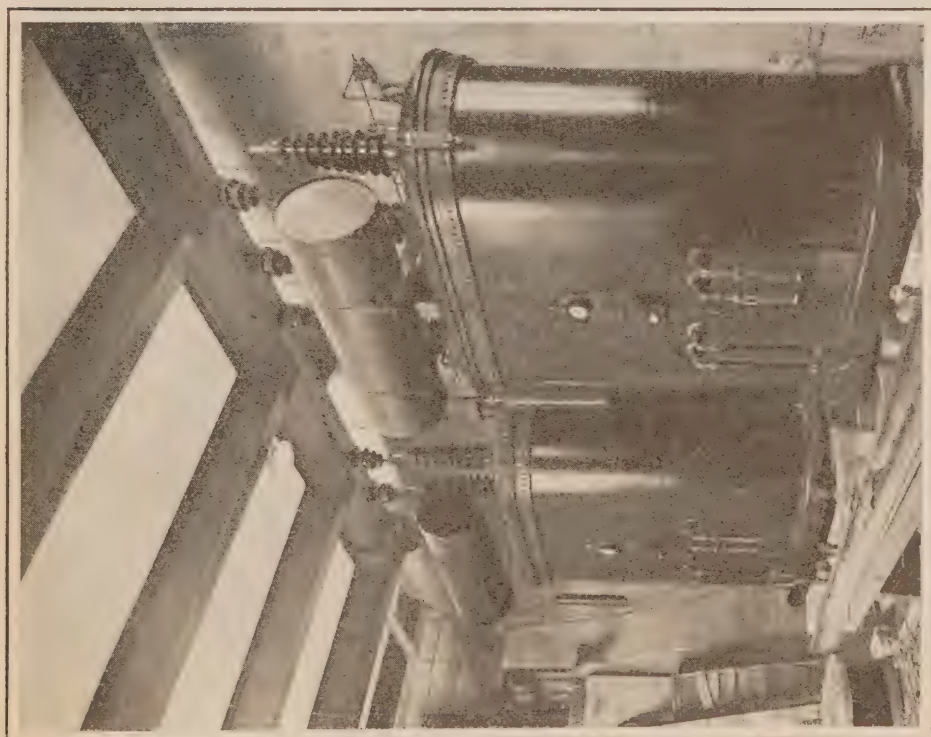


RANNEY FALLS DEVELOPMENT—CENTRAL ONTARIO AND TRENT SYSTEM

Generating station equipment: High-voltage (44,000 volts) lightning-arrester equipment. June 30, 1922



Generating station equipment: High-voltage (44,000 volts) lightning-arrester equipment, June 30, 1922



Generating station equipment: Bank of two 4,500-kv-a., 3-phase transformers, July 1, 1922

1/2- to 1½-ampere, induction-type relay. The current transformers and relay are so connected that unbalanced current only will flow through the relay. A push button is provided in the tripping circuit through this relay so that when exciting these power transformers the breakers affected can be made non-automatic. When the differential relay functions the low-voltage breaker or the emergency-bus feed-breaker if in use and the high-voltage bus-tie and line-breaker to that section of the high-voltage bus operate automatically. Overload protection consisting of three single-pole, 4- to 16-ampere, induction-type relays has also been provided.

Switchboard

All the switchboard apparatus has been mounted on vertical panels. The framework for the board was designed so that all the vertical wiring would be enclosed in the upright supports thus affording considerable fire protection to this wiring. The control, synchronizing and voltage buses are located at the top brace thus leaving all the rear of the panel free for mounting equipment. The signal lamps are supplied from a separate bus, the voltage of which is controlled by a rheostat. Multi-contact relays have been installed to permit of the selective operation of the breakers which are controlled by differential and over voltage relays.

The temperature equipment which has been installed for each generator is mounted on panels located at one end of the switchboard. It consists of a potentiometer-type indicator, a 6-point recorder which has its automatic, cold-junction compensator self-contained, a twelve-point push-button switch and bus-bar board for each unit.

Oil Breakers and Structures

The low voltage, oil switch and bus structure were built of reinforced concrete. The main walls and barrier were poured and the 2-inch barrier were all pre-cast and assembled after the main structure was set. Inserts were placed in the poured portion for mounting all the equipment. Doors are provided up to a height of six feet. These have panels of asbestos except where they are in front of disconnecting-switches.

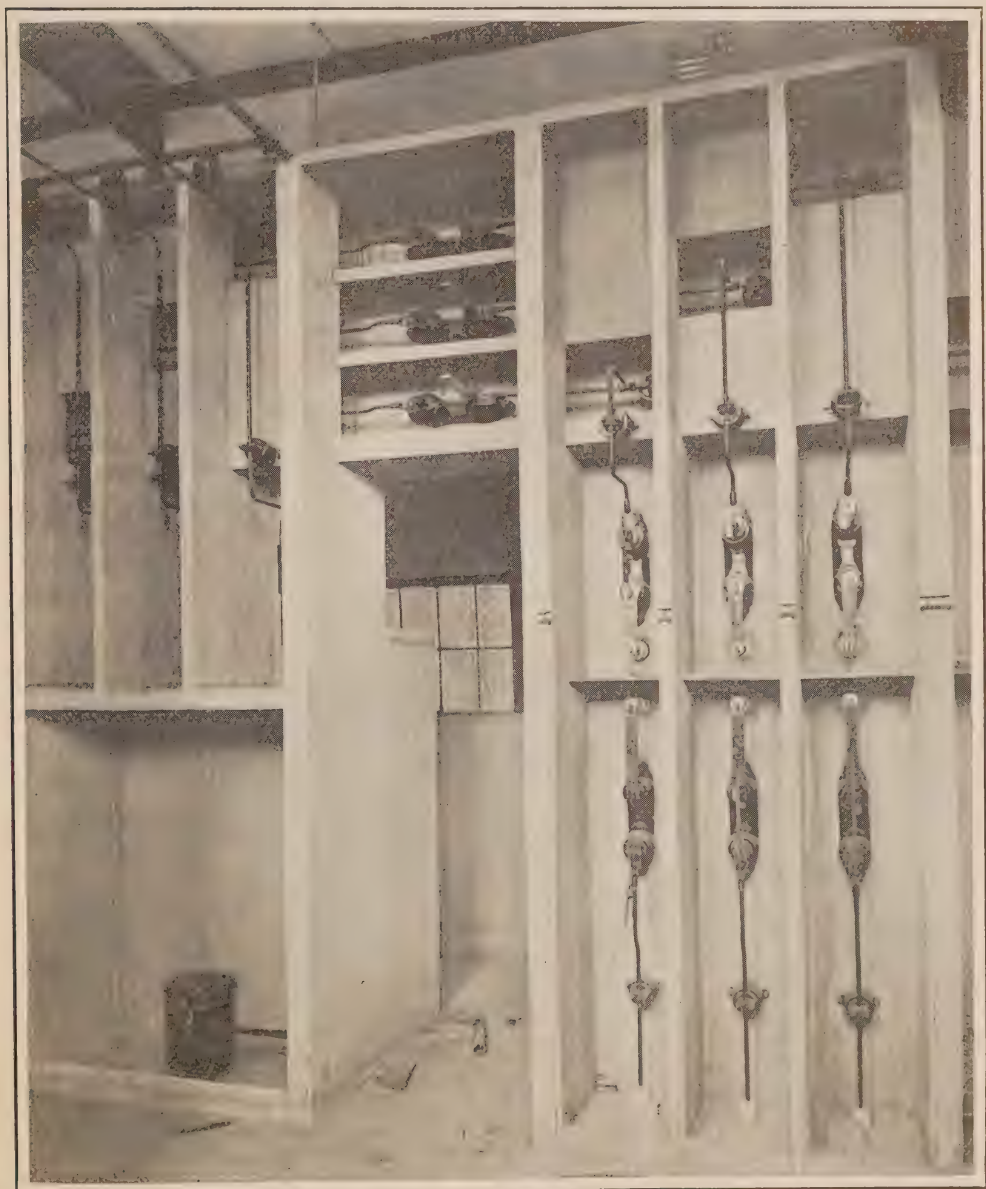
All the breakers are of the solenoid operated type. They all have their closing-coil circuits interlocked with a synchronizing plug except the station service and those on the high-voltage lines. The tripping-coil circuit is connected so that it may be supervised by the indications of the signal lamp, which should be lighted when the breaker is closed.

Cutout switches are mounted on the operating mechanism which permits the operator to make the switch inoperative when it is being inspected.

The low-voltage breakers have a rupturing capacity of 325,000-kv-a. The emergency-bus feeder-switch can be used to replace any of the other switches. Provision has been made to install low-voltage feeders if they are ever required in the future. The high-voltage switches have a rupturing capacity of 225,000-kv-a. The bus-tie switch is non-automatic and will ultimately form a tie between the two Central Ontario system trunk lines from Campbellford to Stirling and from Healey Falls to Trenton. Its chief function will be that of a sectionalizing switch. Provision has been made for two outgoing, high-tension circuits, but only the one supplying power to the Healey Falls-Trenton line has been connected up. The line relay protection consists of three single-pole, unidirectional relays which function when excess power flows out from the station, and one ground relay which has its tripping contacts connected in series with the watt-meter elements on the unidirectional relays to provide selective action.

Station Service

The station service bank of transformers is supplied with power directly from the main 6,600-volt bus. It consists of three 50-kv-a., 1-phase, 60-cycle, pole-type, 6,600/550-volt units. The low voltage is taken to the service switch-board located alongside the main switchboard. Safety-type, quick-make-and-break switches were used, all the leads to and from these switches were placed entirely in conduit. These switches control the power supplied for the crane, the oil and water pumps, the air compressor, heating, lighting, etc.



LANNEY FALLS DEVELOPMENT—CENTRAL ONTARIO AND TRENT SYSTEM
Generating station equipment: Low-voltage (6,600 volts) disconnecting-switches and structures.
June 30, 1922

The lighting is supplied from two 10-kv-a. transformers. The illumination for all parts of the station is controlled from one central lighting cabinet located on the switchboard-room floor quite accessible to the operator. In case of emergency a certain number of the lamps in the different rooms can be readily connected to the battery by means of a double-throw knife-switch located near the operator's desk. Electric heating at 550 volts has been provided only in the switchboard room.

Screened wall openings have been located where required to permit the warm air from the generator to circulate. It is the intention in severe weather to draw all the cooling air for the generators from the main generating room closing off entirely the supply direct from the outside. Provision has been made in the ventilating duct by means of registers to ventilate and heat the basement and the pit between the units by drawing air from the generator room.

Forced ventilation by means of a small electric fan has been provided for the switchboard room and lavatory. This equipment has been so arranged that air can be drawn from the generator room or direct from the outside of the north end of the building, thus providing either heating or cooling.

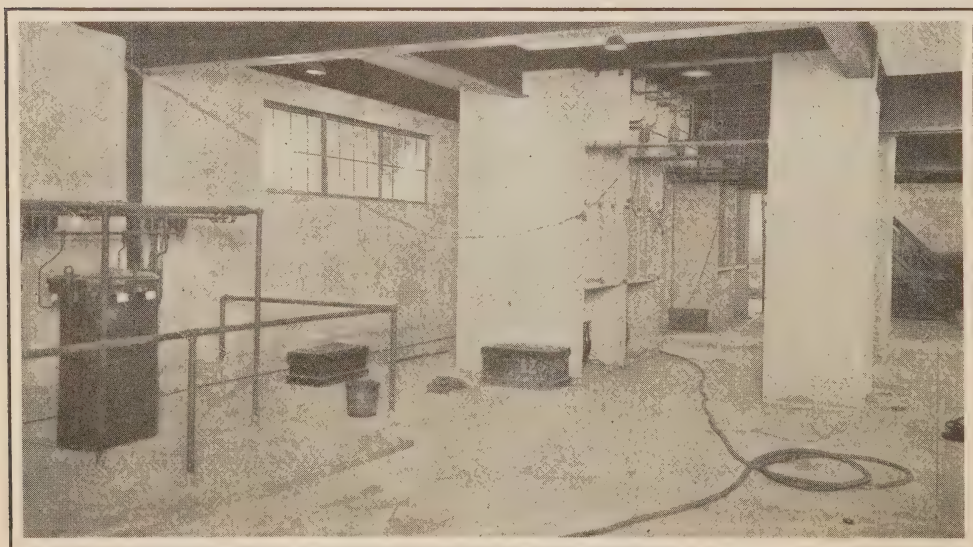
Accommodation

A lavatory including shower bath and locker space is provided on the first gallery for the accommodation of the operators.

Lubricating Oil System

The generator-bearing lubrication scheme is of the continuous filtering type. The oil after coming from the bearings passes through a cotton flannel bag filter before again returning to the bearings.

The filter provides space enough in its good oil chamber to contain all the oil in the system. This feature prevents spillovers in case the system shuts down. Provision is made so that one half of the filter may be closed down while cleaning, without interrupting the oil supply to the generators. Separate supply pipes control the feed to each of the bearings and these have been equipped with sight-flow indicators.



RANNEY FALLS DEVELOPMENT—CENTRAL ONTARIO AND TRENT SYSTEM
Generating station equipment: Low-voltage (6,600 volts) bus-structure. July 1, 1922

An overflow tank, containing enough oil to supply the generators for about an hour, is mounted on the roof trusses and would continue to supply oil by gravity to the bearings providing the pumps fail to operate.

The system is provided with an electric alarm to warn the operator in case the oil supply becomes low.

Duplicate oil pumps located in the basement, with a capacity of 19 Imperial gallons per minute each, supply oil to the system.

Compressed Air Supply

An air receiver for operating the air brakes for bringing the generator rotor to rest is kept charged by means of a small compressor with a capacity of 17 cubic feet of free air per minute installed in the basement of the station. The brakes are controlled by a valve at the generator as well as in the control room. Air for cleaning equipment and for small automatic tools may be obtained from this source.

Cooling Water Supply

As the normal head of the water in the forebay was insufficient as a supply for all purposes, duplicate pumps were installed in the basement, the water being taken from the scroll cases. The pumps are rated at 100 Imperial gallons per minute at 150-feet head and supply cooling water for the thrust bearings of the generators, for the transformer and the protection of the generators in case of fire inside a machine.

A sight-flow indicator has been installed on the supply to the thrust bearing and in the overflow from the transformers.

Grounding

No. 4/0 bare copper wire for grounding has been run throughout the whole station, embedded as a rule under the floor finish and all the structural steel and the frames of the machines and other equipment have been connected to it. The various ground wire loops are brought to one central test link box and independent leads are taken from this point to the turbine cases and out through the walls of the station at the north and south. From here they will be carried to a suitable location for a ground plate. A separate ground has been provided for the high-voltage arresters.

Battery

A 120-ampere-hour, 60-cell battery has been installed to provide power for the electric operation of all the breakers and for emergency lighting. The charging, motor-generator set for the battery (5 kilowatt $7\frac{1}{2}$ horsepower) was installed on the main generator-room floor and the control panel was located on one end of the main switchboard.

SEYMOUR GENERATING STATION

Barriers were installed between the bus-tie, disconnecting-switches on the 2,200-volt bus in Seymour generating station. This work was completed in January, 1922.

As the customers on the Hoards line (6,600 volt) were recently put on the standard rural basis, it was necessary to install meters to get the total demand. Accordingly an "RA" demand-meter was installed and placed in service during November, 1921.

In order that the amount of power supplied from the town plant at Campbellford might be checked, meters were installed on the tie line at Seymour generating station. This work was completed and placed in service during December, 1921.

Adequate relay protection was installed on the tie line between the town

plant and Campbellford and Seymour generating station, the work being completed during November, 1921.

SIDNEY GENERATING STATION

Adequate fire protection equipment was installed during January, 1922, for the protection of the cottages at this generating station. The experimental brake installed for one of the generators in this station has proven satisfactory. It is intended to install brakes on the other units during 1923.

SIDNEY TERMINAL STATION

A new system of relays with instrument transformers of suitable capacity was installed during September, 1922. Unidirectional relays were installed in the loop lines to Healey Falls generating station and Belleville terminal station, and inverse, definite-time, overload relays in the line to Port Hope. Inverse, definite-time, overload relays were also installed in conjunction with the unidirectional relays and overload relays for ground protection. Nine current-transformers of 300-150/5-ampere ratio were purchased and replaced the 80- to 5-ampere bushing-type current-transformers on the lines.

As it is customary to operate this system at times in two sections with Sidney terminal station in the southern section and Healey Falls in the northern section it was decided to arrange the neutrals of the transformer banks in Sidney station to provide for efficient means of grounding at this point with the least possible delay. Healey Falls is grounded at all times with the system operating as one unit and this is sufficient until such time as it is necessary to operate the system in two sections.

Special bushings were purchased for bringing out the neutral lead from the terminal board in the transformer. Disconnecting switches were installed in this lead to cut the neutral clear of ground when not required. This work was completed in October, 1922.

NIPISSING SYSTEM

BINGHAM CHUTE GENERATING STATION

Power requirements of the Nipissing system in the past year have necessitated the development of an additional source of power. In July, 1922, it was decided to proceed with the development of the Bingham Chute power site with a view to having power available for the Nipissing system early in 1923. Three 300-kv-a. transformers and one 450-kw. generator are available for this station from the Nipissing generating station. This equipment was removed at the time of the installation of the 1,400-kv-a. generator and the bank of three 900-kv-a. transformers in that plant.

One generator will be installed, and when this unit is in operation it is the intention to dismantle the second 450-kw. generator at Nipissing and install it at the Bingham Chute plant.

Nipissing Ranger Shanties

Instructions were received in October, 1921, covering the erection of two ranger shanties, one at Surprise Lake, the other at Clear Lake storage dams. These shanties were erected by the Operating department and were completed on March 23, 1922.

NORTH BAY GENERATING STATION

A 150-kv-a., alternating-current generator damaged in the North Bay generating station and repaired by the Canadian Westinghouse Company was subjected to inspection and test prior to being returned to North Bay.

TABLE
OF
TRANSFORMING STATION DETAILS
AS OF
OCTOBER 31, 1922

TABLE OF TRANSFORMING STATION

The particulars given in this table refer to all transforming stations owned or operated by the Hydro-Electric Power Commission of Ontario on October 31, 1922.

Under the columns headed "Circuits" are given the complete number and voltage of circuits of all kinds which enter or leave a station except certain feeders that are not the property of the system.

Under "active" transformers are given all transformers actually in operation and in reserve except service transformers.

Station				Circuits			
System number	Name	Date placed in operation	Type of building	High voltage		Low voltage	
				Volts	No.	Volts	No.
NIAGARA							
N 1	Niagara.....	Aug. 1910	T.S. brick	110,000	4	12,000	12
N 1	“.....	Aug. 1914	T.S. brick	.....	.....	.....	.....
N 1	“.....	Aug. 1914	T.S. brick	46,000	4	.....	.....
N 2	Dundas trans. sta.....	Sept. 1910	T.S. brick	110,000	9	13,200	8
N 237	Caledonia dist. sta.....	Sept. 1912	C. brick	13,200	1	2,300	2
N 239	Hagersville dist. sta.....	Aug. 1913	D. brick	13,200	1	2,300	2
N 234	Lynden dist. sta.....	Sept. 1915	E. brick	13,200	1	4,000	2
N 235	Waterdown dist. sta.....	Apr. 1915	customer	13,200	1	2,300	.....
N 3	Toronto trans. sta.....	Feb. 1911	T.S. brick	110,000	3	13,200	31
N 4	London trans. sta.....	Nov. 1910	T.S. brick	110,000	5	13,200	7
N 442	Ailsa Craig dist. sta.....	Jan. 1916	E. brick	13,200	1	4,000	2
N 432	Delaware dist. sta.....	Mar. 1915	E. brick	13,200	1	4,000	3
N 439	Dorchester dist. sta.....	Dec. 1914	E. brick	13,200	1	4,000	3
N 443	Exeter dist. sta.....	May 1916	D. brick	13,200	1	4,000	4
N 440	Lucan dist. sta.....	Feb. 1915	E. brick	13,200	.....	4,000	2
N 5	Guelph trans. sta.....	Sept. 1910	T.S. brick	110,000	3	13,200	5
N 537	Acton dist. sta.....	Dec. 1912	B. brick	13,200	1	2,300	2
N 538	Cheltenham dist. sta.....	July, 1914	D. brick	13,200	1	575	1
N 533	Elora dist. sta.....	Nov. 1914	E. brick	13,200	1	4,000	1
N 534	Fergus dist. sta.....	Nov. 1914	E. brick	13,200	1	2,300	1
N 539	Georgetown dist. sta.....	Aug. 1913	D. brick	13,200	1	4,000	2
N 536	Rockwood dist. sta.....	Aug. 1913	P. outdoor	13,200	1	2,300	1
N 6	Preston trans. sta.....	Sept. 1910	T.S. brick	110,000	3	13,200	6
N6D31	South Waterloo.....	Mar. 1919	in Preston T.S.	13,200	1	4,000	1
N 7	Kitchener trans. sta.....	Sept. 1910	T.S. brick	110,000	2	13,200	7
N 735	Baden dist. sta.....	May 1912	special	13,200	1	4,000	2
N 734	Elmira dist. sta.....	Oct. 1913	D. brick	13,200	1	4,000	1
N 737	New Hamburg dist. sta.....	Feb. 1911	special	13,200	1	2,300	2e
N 733	St. Jacobs dist. sta.....	Sept. 1917	P. outdoor	13,200	1	575	1
N 8	Stratford trans. sta.....	Nov. 1911	T.S.	110,000	2	26,400	5
N 834	Dublin dist. sta.....	Oct. 1917	P. outdoor	26,400	1	4,000	1
N 841	Harriston dist. sta.....	June 1916	H. brick	26,400	1	4,000	1
N 839	Listowel dist. sta.....	May 1916	special	26,400	1	4,000	1
N 838	Milverton dist. sta.....	May 1916	H. brick	26,400	1	4,000	1
N 840	Palmerston dist. sta.....	June 1916	H. brick	26,400	1	4,000	3d
N 832	Tavistock dist. sta.....	Oct. 1916	special	26,400	1	575	1
N 9	St. Marys trans. sta.....	Apr. 1911	T.S. brick	110,000	2	13,200	2
N 932	St. Marys Cement Co. dist. sta.....	Sept. 1912	special	13,200	7	575	1
						550	1
N 10	Woodstock trans. sta.....	Nov. 1911	T.S. brick	110,000	3	13,200	6
N1034	Beachville dist. sta.....	July 1912	D.L. brick.	13,200	1	2,300	2

Note.—For subnotes *a*, *b*, *c*, etc., see end of table.

DETAILS AS OF OCTOBER 31, 1922

Transformers designated as "spare" are extra units at the station ready for emergency use, whereas those referred to as "reserve" are available for use in stations where and when increased capacity is required.

The total kv-a. of all transformers is 1,082,730 kv-a. made up of 876,960 kv-a. in operation, 63,150 kv-a. in reserve and 142,620 kv-a. spare.

There are 884,685 kv-a. of 25-cycle transformers and 198,045 kv-a. of 60 cycle units, making together the total of 1,082,730.

Transformers										
Active							Spare			
No. of banks	No. of units	Make of units	Unit kv-a.	Phase rating of unit	Total kv-a.	Banks connected		Single phase except where otherwise stated		
						H.V.	L.V.	No.	Make	Unit kv-a.
SYSTEM—25 CYCLES										
5	15	C.W. Co.	3,500	1	52,500	Y	△	7	C.W. Co.	3,500
4	12	C.W. Co.	7,500	1	90,000	Y	△	.....	.....	.....
3	9	C.G.E. Co.	3,500	1	31,500	Y	△	.....	C.G.E. Co.	3,500
2	6	C.G.E. Co.	2,500	1	15,000	Y	△	1	C.G.E. Co.	2,500
1	3	P.T. Co.	150	1	450	△	△	.....	.....	.....
1	3	C.C.W. Co.	150	1	450	△	Y	3	C.W. Co.	75
1	3	C.W. Co.	75	1	225	△	Y	.....	.....	.....
1	3	C.C.W. Co.	75	1	225	△	△	.....	.....	.....
5	15	C.G.E. Co.	5,000	1	75,000	Y	△	3	C.G.E. Co.	5,000
{1	3	C.G.E. Co.	5,000	1	15,000	Y	△	4	C.G.E. Co.	5,000
{1	3	C.G.E. Co.	2,500	1	7,500	Y	△	.....	.....	.....
1	3	C.W. Co.	75	1	225	△	Y	.....	.....	.....
1	3	P.E. Co.	25	1	75	△	Y	.....	.....	.....
1	3	C.W. Co.	75	1	225	△	Y	.....	.....	.....
1	3	C.G.E. Co.	100	1	300	△	Y	.....	.....	.....
1	3	C.G.E. Co.	75	1	225	△	Y	.....	.....	.....
1	3	C.G.E. Co.	2,500	1	7,500	Y	△	3	C.G.E. Co.	1,250
1	3	C.W. Co.	75	1	225	△	△	.....	.....	.....
1	3	C.G.E. Co.	75	1	225	△	△	.....	.....	.....
1	3	C.W. Co.	75	1	225	△	Y	.....	.....	.....
1	3	C.G.E. Co.	75	1	225	△	△	.....	.....	.....
1	3	C.G.E. Co.	150	1	450	△	Y	.....	.....	.....
1	3	C.G.E. Co.	25	1	75	△	△	.....	.....	.....
{1	3	G.E.	1,250	1	3,750	Y	△	4	G.E. Co.	750
{1	3	G.E.	750	1	2,250	Y	△	.....	.....	.....
1	3	C.G.E. Co.	20	1	60	△	Y	.....	.....	.....
{1	3	C.G.E. Co.	1,250	1	3,750	Y	△	.....	.....	.....
{1	3	C.G.E. Co.	2,500	1	7,500	Y	△	1	C.G.E. Co.	2,500
1	3	C.C.W. Co.	150	1	450	△	Y	.....	.....	.....
1	3	C.G.E. Co.	150	1	450	△	Y	.....	.....	.....
1	3	P.E. Co.	75	1	225	△	△	.....	.....	.....
1	1	M.E. Co.	75	3	75	△	△	.....	.....	.....
1	3	C.W. Co.	1,250	1	3,750	Y	△	3	C.W. Co.	1,250
1	1	M.E. Co.	50	3	50	△	Y	.....	.....	.....
1	3	C.G.E. Co.	75	1	225	△	Y	.....	.....	.....
1	3	C.G.E. Co.	200	1	600	△	Y	.....	.....	.....
1	3	C.G.E. Co.	150	1	450	△	Y	3	C.G.E. Co.	75
1	3	C.G.E. Co.	75	1	225	△	Y	.....	.....	.....
1	3	C.C.W. Co.	75	1	225	△	△	.....	.....	.....
1	3	G.E. Co.	750	1	2,250	Y	△	1	G.E. Co.	750
1	3	C.G.E. Co.	500	1	1,500	△	△	.....	.....	.....
1	3	P.E. Co.	150	1	450	△	△	.....	.....	.....
1	3	C.G.E. Co.	1,250	1	3,750	Y	△	2	G.E. Co.	750
1	3	C.G.E. Co.	75	1	225	△	△	.....	.....	.....

TABLE OF TRANSFORMING STATION

Station				Circuits			
System number	Name	Date placed in operation	Type of building	High voltage		Low voltage	
				Volts	No.	Volts	No.
NIAGARA							
N1033	Embryo dist. sta.....	Dec. 1914	E. brick	13,200	1	4,000	1
N1036	Norwich dist. sta.....	Mar. 1912	special	13,200	1	2,300	2
N 11	St. Thomas trans. sta.....	Feb. 1912	T.S. brick	110,000	4	13,200	8
N1133	London & Pt. Stanley Ry...	June 1915	In T.S.	13,200	3	920	3
N1138	Aylmer dist. sta.....	Feb. 1915	special	13,200	1	4,000	2
N1134	Dutton dist. sta.....	Aug. 1915	E. brick	13,200	1	4,000	1
N1135	West Lorne dist. sta.....	Dec. 1916	E. brick	13,200	1	4,000	2
N1137	Port Stanley dist. sta.....	Mar. 1912	B. brick	13,200	1	2,300	1
N 12	Brant trans. sta.....	Jan. 1914	T.S. brick	110,000	4	26,400	6
N1240	Ayr dist. sta.....	Dec. 1914	H. brick	26,400	1	4,000	1
N1234	Burford dist. sta.....	May 1915	H. brick	26,400	1	4,000	1
N1241	Drumbo dist. sta.....	Dec. 1914	H. brick	26,400	1	4,000	3
N1233	St. George dist. sta.....	Sept. 1915	In Brant T.S.	4,000	1	2,300	1
N1235	Waterford dist. sta.....	May 1915	H. brick	26,400	1	4,000	1
N 13	Cooksville trans. sta.....	Nov. 1911	T.S. brick	110,000	3	13,200	8
N1331	Port Credit dist. sta.....	Aug. 1912	B. brick	13,200	1	2,300	1
N1339	Streetsville dist. sta.....	Nov. 1913	D. brick	13,200	2	2,300	2
N 14	Kent trans. sta.....	Aug. 1914	T.S. brick	110,000	4	26,400	6
N1434	Blenheim dist. sta.....	Oct. 1915	H. brick	26,400	1	4,000	1
N1438	Bothwell dist. sta.....	Aug. 1915	H. brick	26,400	1	4,000	2
N1442	Brigden dist. sta.....	Dec. 1917	P. outdoor	26,400	1	575	1
N1440	Dresden dist. sta.....	Mar. 1915	H. brick	26,400	1	4,000	1
N1445	Forest dist. sta.....	Feb. 1917	H. brick	26,400	1	4,000	2
N1441	Oil Springs dist. sta.....	Dec. 1917	P. outdoor	26,400	1	4,000	3
N1443	Petrolia dist. sta.....	Apr. 1916	G. brick	26,400	2	4,000	5b
N1435	Ridgetown dist. sta.....	Dec. 1915	H. brick	26,400	1	4,000	3a
N1437	Thamesville dist. sta.....	Oct. 1915	H. brick	26,400	1	4,000	1
N1432	Tilbury dist. sta.....	Apr. 1915	G. brick	26,400	1	4,000	2
N1439	Wallaceburg dist. sta.....	Feb. 1915	G. brick	26,400	1	4,000	5bu
N1446	Watford dist. sta.....	Sept. 1917	P. outdoor	26,400	2	4,000	2
N 15	Essex trans. sta.....	Aug. 1914	T.S. brick	110,000	2	26,400	7
J 2	Amherstburg dist. sta.....	Feb. 1919	special	26,400	2	4,000	3a
J 1	Canard River dist. sta.....	Jan. 1914	P. outdoor	26,400	1	115	1
N1533	Can. Salt Co. dist. sta.....	Nov. 1917	special	26,400	2	176	2
J 6	Cottam dist. sta.....	Oct. 1915	P. outdoor	26,400	1	115	1
J 7	Essex dist. sta.....	Oct. 1914	P. outdoor	26,400	1	2,300	1
J 3	Harrow dist. sta.....	Jan. 1914	P. outdoor	26,400	1	2,300	1
J 4	Kingsville dist. sta.....	Jan. 1914	special	26,400	2	4,000	3
J 20	Leamington dist. sta.....	Aug. 1915	special	26,400	1	4,000	3
J98-1	Essex County System reserve equipment.....						
N 16	York trans. sta.....	Oct. 1919	temp. sh. iron	110,000	1	13,200	1
N1632	Mimico dist. sta.....	May 1912	C. brick	13,200	1	4,000	2
N1634	Woodbridge dist. sta.....	Dec. 1914	E. brick	13,200	1	4,000	3
N1631	Etobicoke dist. sta.....	Sept. 1918	special	13,200	2	2,300	6
N 17	Hamilton trans. sta.....	Oct. 1922	outdoor	110,000	2	4,000	2
						13,200	2i

Note.—For subnotes *a*, *b*, *c*, etc., see end of table

DETAILS AS OF OCTOBER 31, 1922—Continued

Transformers										
Active							Spare			
No. of banks	No. of units	Make of units	Unit kv-a.	Phase rating of unit	Total kv-a.	Banks connected		Single phase except where otherwise stated		
						H.V.	L.V.	No.	Make	Unit kv-a.
SYSTEM—25 CYCLES—Continued										
1	1	P.E. Co.	50	3	50	△	Y	.....	.....	.....
1	3	P.E. Co.	75	1	225	△	△	.....	.....	.....
2	6	G.E. Co.	750	1	4,500	Y	△	1	G.E. Co.	750
3	9	C.W. Co.	185	1	1,665	△	△	.....	.....	.....
1	3	C.G.E. Co.	50	1	150	△	Y	.....	.....	.....
1	3	C.W. Co.	75	1	225	△	Y	.....	.....	.....
1	3	C.W. Co.	75	1	225	△	Y	.....	.....	.....
1	3	C.G.E. Co.	100	1	300	△	△	.....	.....	.....
1	3	C.W. Co.	2,500	1	7,500	Y	△	1	C.W. Co.	2,500
1	3	C.G.E. Co.	75	1	225	△	Y	.....	.....	.....
1	1	M.E. Co.	75	3	75	△	Y	.....	.....	.....
1	3	C.G.E. Co.	75	1	225	△	Y	.....	.....	.....
1	3	C.C.W. Co.	50	1	150	Y	△	.....	.....	.....
1	3	C.W. Co.	75	1	225	△	Y	.....	.....	.....
1	3	G.E. Co.	1,250	1	3,750	Y	△	1	G.E. Co.	1,250
1	3	C.G.E. Co.	75	1	225	△	△	.....	.....	.....
1	3	C.G.E. Co.	75	1	225	△	△	.....	.....	.....
{1	3	C.W. Co.	1,250	1	3,750	Y	△	1	C.G.E. Co.	2,500
{1	3	C.G.E. Co.	2,500	1	7,500	Y	△	.....	.....	.....
1	3	C.W. Co.	75	1	225	△	Y	.....	.....	.....
1	3	C.W. Co.	75	1	225	△	Y	.....	.....	.....
1	1	M.E. Co.	75	3	75	△	△	.....	.....	.....
1	3	C.W. Co.	75	1	225	△	Y	.....	.....	.....
1	3	C.C.W. Co.	75	1	225	△	△	.....	.....	.....
{1	1	M.E. Co.	75	3	75	△	Y	.....	.....	.....
{1	1	C.W. Co.	150	3	150	△	Y	.....	.....	.....
1	3	P.E. Co.	300	1	900	△	Y	3	C.G.E. Co.	150
1	3	C.W. Co.	75	1	225	△	Y	.....	.....	.....
1	3	C.W. Co.	75	1	225	△	Y	.....	.....	.....
1	3	C.G.E. Co.	100	1	300	△	Y	.....	.....	.....
{1	3	C.G.E. Co.	150	1	450	△	Y	.....	.....	.....
1	3	P.E. Co.	150	1	450	△	Y	.....	.....	.....
1	1	M.E. Co.	150	3	150	△	Y	.....	.....	.....
{1	3	C.W. Co.	2,500	1	7,500	Y	△	1	C.G.E. Co.	5,000
{1	3	C.G.E. Co.	5,000	1	15,000	Y	△	.....	.....	.....
1	3	P.E. Co.	100	1	300	△	Y	.....	.....	.....
1	1	M.E. Co.	25	1	25	.....	.....	.....	.....	.....
2	6	M.E. Co.	750	1	4,500	△	6●	.....	.....	.....
1	1	M.E. Co.	25	1	25	.....	.....	.....	.....	.....
1	1	P.E. Co.	150	3	150	△	△	.....	.....	.....
1	1	M.E. Co.	75	3	75	△	△	.....	.....	.....
1	3	C.W. Co.	75	1	225	△	Y	.....	.....	.....
1	3	C.C.W. Co.	75	1	225	△	Y	.....	.....	.....
.....	1	M.E. Co.	75	3	75	26400m 13200△	4000Y 2300△	.....	.....	.....
1	3	G.E. Co.	1,250	1	3,750	Y	△	1	G.E. Co.	1,250
1	3	C.C.W. Co.	150	1	450	△	Y	.....	.....	.....
1	3	C.G.E. Co.	75	1	225	△	Y	.....	.....	.....
2	2	C.C.W. Co.	1,500	3	3,000	Y	△	1	C.C.W. Co.	1,500
1	1	C.W. Co.	1,500	3	1,500	Y	Y	.....	.....	.....
1	3	C.W. Co.	5,000	1	15,000	Y	△	4	C.W. Co.	5,000

TABLE OF TRANSFORMING STATION

Station				Circuits			
System number	Name	Date placed in operation	Type of building	High voltage		Low voltage	
				Volts	No.	Volts	No.

NIAGARA

N7D31	Saltfleet dist. sta.....	Feb. 1922	P. outdoor	13,200	1	4,000	1
N 20	Queenston.....	Jan. 1922	concrete special	110,000	3	12,000	1
						4,000	1

ONTARIO POWER COMPANY

A 2	O.P. Co. dist. sta.....	1905	Brick special	60,000	2	12,000	11
A 3	Port Colborne dist. sta.....	Sept. 28, 1913	special	30,000	2	2,300	2
				30,000	2	12,000	4
NC 701	Montrose dist. sta.....	Feb. 1920	corrugated iron special	12,000	2	4,000	2

NIAGARA

N98-1	Niagara System Res. Equip.						
N98-2	" " " "						
N98-3	" " " "						
N98-6	" " " "						
N98-7	" " " "						
N98-8	" " " "						
N98-9	" " " "						
N98-11	" " " "						
N98-12	" " " "						
N98-13	" " " "						
N98-14	" " " "						
N98-19	" " " "						
N98-20	" " " "						

Note.—For subnotes a, b, c, etc., see end of table.

DETAILS AS OF OCTOBER 31, 1922—Continued

Transformers										
Active							Spare			
No. of banks	No. of units	Make of units	Unit kv-a.	Phase rating of unit	Total kv-a.	Banks connected		Single phase except where otherwise stated		
						H.V.	L.V.	No.	Make	Unit kv-a.

SYSTEM—25 CYCLES—Continued

1	1	M.E. Co.	400	3	400	Y	Y	...	...	...
4	12	C.W. Co.	15,000	1	180,000	Y	△	no	spares	...
1	3	C.W. Co.	15,000	1	^c 45,000	...	...	...	...	...
3	9	M.E. Co.	200	1	^d 1,800	Y	△	...	...	...

SYSTEM—25 CYCLES

4	12	W.E. & M. Co.	3,000	1	36,000	Y	△	none	...	...
2	6	C.W. Co.	3,000	1	18,000	Y	△	none	...	...
1	3	C.G.E. Co.	150	1	450	△	△	3	P.T. Co.	25
1	3	C.W. Co.	1,500	1	4,500	△	△	2	P.T. Co.	50
								1	C.W. Co.	60
					58,950					235
{1	1	C.C.W. Co.	1,500	3	1,500	△	Y	1	C.G.E. Co.	550
{1	1	C.G.E. Co.	1,500	3	1,500	△	Y	...	...	...

SYSTEM—Continued

.....	4	C.W. Co.	750	1	3,000	63500 ^m	13200 ^m	...	...	...
.....	1	G.E. Co.	750	1	750	63500 ^m	13200 ^m	...	...	...
.....	4	C.G.E. Co.	750	1	3,000	63500 ^m	13200 ^m	...	...	...
.....	1	M.E. Co.	75	3	75	26400 ^m	4000 ^Y	...	...	...
						13200 [△]	2300/575 [△]			
.....	3	P.E. Co.	75	1	225	26400 ^m	2300 ^m	...	...	...
						13200	575			
						^m				
.....	1	M.E. Co.	750	3	750	26400 ^Y	4000 ^m	...	...	...
						13200	2300/575 [△]			
						^m				
.....	2	C.C.W. Co.	1,500	3	3,000	45700 ^Y	4000 ^Y	...	...	...
						26400	2300			
						13200 [△]	575 [△]			
.....	7	C.G.E. Co.	5,000	1	35,000	63500 ^m	26400 ^m	...	...	...
						13200				
.....	2	C.W. Co.	5,000	1	10,000	63500 ^m	26400 ^m	...	...	...
						13200				
						^m				
.....	2	C.C.W. Co.	1,500	3	3,000	26400 ^Y	4000 ^Y	...	...	...
						13200	2300 [△]			
.....	1	M.E. Co.	50	3	50	26400 ^m	4000 ^Y	...	...	...
						13200 [△]	2300/575 [△]			
.....	1	C.W. Co.	2,500	1	2,500	63500 ^m	26400 ^m	...	...	...
						13200				
.....	1	M.E. Co.	50	3	50	26400 ^m	4000 ^m	...	...	...
						13200	2300/575 [△]			

TABLE OF TRANSFORMING STATION

Station				Circuits			
System number	Name	Date placed in operation	Type of building	High voltage		Low voltage	
				Volts	No.	Volts	No.
SEVERN							
S 1	Midland dist. sta.	Aug. 27, 1911	brick special	22,000	3	2,300	5e
S 2	Penetang dist. sta.	Nov. 1911	brick special	22,000	1	2,200	4e
S 4	Barrie dist. sta.	Mar. 1913	brick special	22,000	1	2,300	5e
S5-10	Collingwood Electric Castings dist. sta.	May 7, 1922 1913	G. brick	22,000	1	575	1
S 5	Collingwood dist. sta.		brick special	22,000	4	2,300	2e
S 6	Coldwater dist. sta.	1913	G. brick	22,000	1	2,300	1
S 7	Elmvale dist. sta.	May 27, 1913	G. brick	22,000	1	2,300	1
S 10	Stayner dist. sta.	Sept. 1913	G. brick	22,000	1	4,000	2
S 11	Midland (G.T.R. Tiffin) dist. sta.	Sept. 15, 1922 Feb. 1921	brick special	22,000	2	575	1
S 17	Pt. McNicoll dist. sta.		P. outdoor	2,200	1	575	1
S 18	Waubaushe dist. sta.	Nov. 13, 1914	E. brick	22,000	1	2,300	1
S 19	Victoria Harbor dist. sta.	July 1, 1914	brick special	22,000	1	2,300	1
S 20	Big Chute gen. sta.	July 17, 1914	concrete special	22,000	3	2,200	0
S 21	C.P.R., Pt. McNicoll.	July 15, 1916	brick special.	22,000	2	575	1
S 22	Camp Borden dist. sta.	June 29, 1916	brick special.	22,000	1	2,200	3e
S 32	Alliston, dist. sta.	May 23, 1918	H. brick	22,000	1	4,000	1
S 33	Beeton dist. sta.	July 26, 1918	P. outdoor	22,000	1	4,000	1
S 34	Tottenham dist. sta.	Sept. 19, 1918	P. outdoor	22,000	1	4,000	1
S 35	Cookstown dist. sta.	Apr. 25, 1918	P. outdoor	22,000	1	4,000	1
S 36	Thornton dist. sta.	Oct. 16, 1918	P. outdoor	22,000	1	4,000	1
S 37	Bradford dist. sta.	Sept. 6, 1918	H. brick modified	{ 22,000 575	1	575	1
S98-2	Reserve equipment	May 3, 1921			1	4,000	1

EUGENIA

E 1	Eugenia gen. sta.	Nov. 18, 1915	brick special	22,000	6	4,000	2
E 2	Owen Sound dist. sta.	Nov. 18, 1915	brick special	22,000	2	2,300	4
E 3	Chatsworth dist. sta.	Nov. 18, 1915	H. brick	22,000	1	4,000	1
E 4	Chesley dist. sta.	June 18, 1916	G. brick	22,000	1	4,000	1
E 5	Dundalk dist. sta.	Nov. 18, 1915	H. brick	22,000	1	4,000	1
E 7	Durham dist. sta.	Nov. 18, 1915	H. brick	22,000	1	4,000	2
E 8	Hanover dist. sta.	1918	G. brick modified	22,000	1	4,000	3
E 9	Mt. Forest dist. sta.	Nov. 18, 1915	G. brick	22,000	1	2,300	1
E10	Shelburne dist. sta.	Sept. 5, 1917	H. brick	22,000	1	4,000	1
E12	Orangeville dist. sta.	Feb. 1917	G. brick	22,000	1	4,000	2
E13	Grand Valley dist. sta.	Aug. 1917	H. brick mod.	22,000	1	4,000	2
E15	Kilsyth dist. sta.	Jan. 1, 1918	P. outdoor	22,000	1	4,000	1
E17	Elmwood dist. sta.	May 23, 1918	P. outdoor	22,000	1	4,000	1
E18	Priceville dist. sta.	Mar. 17, 1921	P. outdoor	22,000	2	2,200	1
E21	Teeswater dist. sta.	May, 1921	H. brick	22,000	1	4,000	2
E22	Wingham dist. sta.	April, 1921	G. brick	22,000	1	2,300	4
E24	Holyrood dist. sta.	April, 1921	outdoor special	22,000	1	4,000	2
E25	Kincardine dist. sta.	May, 1921	special brick	22,000	1	2,200	2
E26	Walkerton Quarry dist. sta.	Feb. 28, 1921	frame	22,000	1	2,300	2
E29	Durham, Russell dist. sta.	May 7, 1922	P. outdoor	22,000	2	575	1

Note.—For subnotes *a*, *b*, *c*, etc., see end of table.

DETAILS AS OF OCTOBER 31, 1922—Continued

Transformers										
Active							Spare			
No. of banks	No. of units	Make of units	Unit kv-a.	Phase rating of unit	Total kv-a.	Banks connected		Single phase except where otherwise stated		
						H.V.	L.V.	No.	Make	unit kv-a.

SYSTEM—60 CYCLES

1	3	M.E. Co.	300	1	900	△	△	.....	.....	.....
1	3	C.C.W. Co.	200	1	600	△	△	.....	.....	.....
{	2	P.E. Co.	350	1	700	T	+	.....	.....	.....
	2	C.G.E. Co.	350	1	700	T	+	.....	.....	.....
1	3	M.E. Co.	300	1	900	△	△	.....	.....	.....
1	3	C.G.E. Co.	400	1	1,200	△	△	.....	.....	.....
1	3	C.G.E. Co.	25	1	75	△	△	.....	.....	.....
1	3	C.W. Co.	75	1	225	△	△	.....	.....	.....
1	3	C.W. Co.	100	1	300	△	Y	.....	.....	.....
1	3	C.G.E. Co.	400	1	1,200	△	△	.....	.....	.....
1	3	P.E. Co.	15	1	45	△	△	.....	.....	.....
1	2	C.G.E. Co.	25	1	50	V	V	.....	.....	.....
1	1	C.W. Co.	100	1	100	1●	1●	.....	.....	.....
2	6	C.W. Co.	600	1	3,600	△	△	1	C.W. Co.	600
1	3	C.G.E. Co.	500	1	1,500	△	△	.....	.....	.....
1	3	C.W. Co.	125	1	375	△	△	.....	.....	.....
1	3	P.E. Co.	75	1	225	△	Y	.....	.....	.....
1	1	M.E. Co.	75	3	75	△	Y	.....	.....	.....
1	1	M.E. Co.	75	3	75	△	Y	.....	.....	.....
1	1	C.G.E. Co.	75	3	75	△	Y	.....	.....	.....
1	1	M.E. Co.	25	3	25	△	Y	.....	.....	.....
1	1	C.G.E. Co.	75	3	75	△	△	.....	.....	.....
1	3	C.G.E. Co.	15	1	45	△	Y	.....	.....	.....
.....	1	C.G.E. Co.	25	1	25	22,000m	2,300/575	.....	.....	.....

SYSTEM—60 CYCLES

2	6	C.W. Co.	900	1	5,400	△	△	.....	.....	.....
1	3	C.W. Co.	550	1	1,650	△	△	.....	.....	.....
1	3	C.G.E. Co.	25	1	75	△	Y	.....	.....	.....
1	3	C.G.E. Co.	100	1	300	△	Y	.....	.....	.....
1	3	C.G.E. Co.	50	1	150	△	Y	.....	.....	.....
1	3	C.G.E. Co.	50	1	150	△	Y	.....	.....	.....
2	2	P.E. Co.	750	3	1,500	△	△	.....	.....	.....
1	1	P.E. Co.	750	3	750	△	Y	.....	.....	.....
1	3	C.G.E. Co.	100	1	300	△	Y	.....	.....	.....
1	3	M.E. Co.	50	1	150	△	Y	.....	.....	.....
1	3	G.E. Co.	100	1	300	△	Y	.....	.....	.....
1	3	C.G.E. Co.	75	1	225	△	Y	.....	.....	.....
1	1	M.E. Co.	75	3	75	△	Y	.....	.....	.....
1	1	M.E. Co.	50	3	50	△	Y	.....	.....	.....
1	2	G.E. Co.	10	1	20	V	V	.....	.....	.....
1	3	C.G.E. Co.	50	1	150	△	Y	.....	.....	.....
1	3	C.G.E. Co.	250	1	750	△	△	.....	.....	.....
1	3	C.W. Co.	100	1	300	△	Y	.....	.....	.....
1	3	C.W. Co.	125	1	375	△	△	.....	.....	.....
1	3	M.E. Co.	150	1	450	△	△	.....	.....	.....
1	3	M.E. Co.	100	1	300	△	△	.....	.....	.....

TABLE OF TRANSFORMING STATION

Station				Circuits			
System number	Name	Date placed in operation	Type of building	High voltage		Low voltage	
				Volts	No.	Volts	No.
WASDELLS							
W 1	Wasdells Falls dist. sta.	Sept., 1914	concrete special	22,000	2	2,300	2
W 2	Beaverton dist. sta.	Sept., 1914	G. special brick	22,000	1	4,000	1
W 3	Cannington dist. sta.	Sept., 1914	G. brick	22,000	1	4,000	1
W 6	Kirkfield dist. sta.	April 22, 1920	H. concrete	22,000	1	575	1
				4,000	1	575	1
W 7	Greenbank dist. sta.	Sept., 1922	P. outdoor	22,000	1	4,000	1
MUSKOKA							
M 1	South Falls gen. sta.	Sept., 1916	brick special	22,000	1	6,600	1
M 2	Huntsville dist. sta. ....	.....	G. brick special	22,000	1	2,300	1
ST. LAWRENCE							
L 1	Cornwall trans. sta.	May 1, 1919	brick	110,000	2	44,000	2
L 2	Prescott dist. sta.	Mar., 1914	G. outdoor	44,000	1	2,400	3
L 3	Brockville dist. sta.	April, 1915	brick	44,000	1	2,400	3
L 4	Winchester dist. sta.	July 18, 1914	G. brick	26,400	1	4,000	1
L 5	Chesterville dist. sta.	Aug. 3, 1919	S. outdoor mod.	26,400	1	4,160	1
L 6	Cornwall Howard Smith Paper Co. dist. sta.	June 15, 1919	brick	44,000	1	600	7
L 7	Williamsburg dist. sta.	Dec. 24, 1920	outdoor	26,400	1	2,400	1
L13	Martintown dist. sta.	May 25, 1921	R. outdoor	44,000	1	4,160	1
L14	Apple Hill dist. sta.	Feb. 22, 1921	S. outdoor mod.	44,000	1	4,160	1
L15	Alexandria dist. sta.	Jan. 18, 1921	S. outdoor mod.	44,000	1	4,160	1
L21	Morrisburg dist. sta.	Oct. 1, 1922	outdoor	44,000	1	26,400	1
L98	Reserve. ....	.....	.....	.....	.....	.....	.....
RIDEAU							
H 1	High Falls gen. sta.	May 1, 1920	concrete	25,400	1	4,160	...
H 2	Perth dist. sta.	Feb. 27, 1920	G. brick mod.	26,400	1	2,300	2
H 3	Smiths Falls dist. sta.	Sept. 15, 1918	stone	25,400	1	2,400	3
H 5	Carleton Place dist. sta.	May 31, 1920	brick	26,400	1	2,200	4
H 8	Balderson dist. sta.	Sept. 29, 1921	R. outdoor	26,400	1	2,400	1
H 9	Kemptville dist. sta.	Nov. 28, 1921	R. outdoor	25,400	1	4,160	1
THUNDER BAY							
P 1	Nipigon gen. sta.	Dec. 20, 1920	concrete special	110,000	1	12,000	2
P 2	Pt. Arthur trans. sta.	Dec. 20, 1920	wood frame and gunite special	110,000	1	22,000	3
P231	Pt. Arthur dist. sta. ....	.....	brick special	22,000	4	2,200	8
CENTRAL ONTARIO AND TRENT							
C 3	Sidney term. sta.	1911k	brick special	44,000	3	6,600	6
C 6	Brighton trans. sta.	1911k	brick special	44,000	1	4,160	1
C 7	Colborne trans. sta.	1912k	brick special	44,000	1	2,400	1
C10	Ranney Falls gen. sta.	1922	concrete special				
			and stone	44,000	1	6,600	...
C11	Seymour gen. sta.	1909k	special stone	44,000	2	2,400	3
C13	Cobourg trans. sta.	1911k	brick special	44,000	1	2,400	4
C14	Healey Falls gen. sta.	1914k	brick special	44,000	3	6,600	1
C16	Port Hope trans. sta.	1912k	brick special	44,000	1	2,400	3
C18	Auburn gen. sta.	1912k	brick special	6,600	4	2,400	2
C19	Auburn trans. sta.	1912k	brick special	44,000	1	6,600	2

Note.—For subnotes *a*, *b*, *c*, etc., see end of table.

DETAILS AS OF OCTOBER 31, 1922—Continued

Transformers										
Active								Spare		
No. of banks	No. of units	Make of units	Unit kv-a.	Phase rating of unit	Total kv-a.	Banks connected		Single phase except where otherwise stated		
						H.V.	L.V.	No.	Make	Unit kv-a.
SYSTEM—60 CYCLES										
2	6	C.W. Co.	150	1	900	△	△	1	C.W. Co.	150
1	3	C.W. Co.	100	1	300	△	Y	.....	.....	.....
1	3	C.W. Co.	100	1	300	△	Y	.....	.....	.....
1	3	P.E. Co.	75	1	225	△	△	.....	.....	.....
1	3	M.E. Co.	10	1	30	Y	△	.....	.....	.....
1	1	C.G.E. Co.	150	3	150	△	Y	.....	.....	.....
SYSTEM—60 CYCLES										
1	3	C.G.E. Co.	400	1	1,200	△	△	.....	.....	.....
1	3	C.G.E. Co.	300	1	900	△	△	.....	.....	.....
SYSTEM—60 CYCLES										
1	3	C.G.E. Co.	5,000	1	15,000	Y	Y	1	C.G.E. Co.	5,000
1	1	P. E. Co.	300	3	300	Y	△	4	C.G.E. Co.	1,250
2	2	C.G.E. Co.	750	3	1,500	Y	△	.....	.....	.....
1	3	C.G.E. Co.	50	1	150	△	Y	.....	.....	.....
1	1	C.G.E. Co.	300	3	300	△	Y	.....	.....	.....
{1	1	C.G.E. Co.	1,500	3	1,500	Y	△	.....	.....	.....
	1	C.G.E. Co.	750	3	750	Y	△	.....	.....	.....
	1	M.E. Co.	30	1	30	1	1	.....	.....	.....
	1	P.E. Co.	150	3	150	Y	Y	.....	.....	.....
	1	P.E. Co.	300	3	300	Y	Y	.....	.....	.....
1	1	P.E. Co.	300	3	300	Y	Y	.....	.....	.....
1	1	P.E. Co.	300	3	300	Y	△	.....	.....	.....
1	1	C.G.E. Co.	750	3	750	△	△	.....	.....	.....
						25,400	600			
SYSTEM—60 CYCLES										
3	3	P.E. Co.	750	3	2,250	△	Y	.....	.....	.....
1	3	C.W. Co.	200	1	600	△	△	.....	.....	.....
1	1	C.G.E. Co.	750	3	750	△	△	.....	.....	.....
1	3	P.T. Co.	250	1	750	△	△	.....	.....	.....
1	1	M.E. Co.	30	1	30	..	..	.....	.....	.....
1	1	P.E. Co.	150	3	150	△	Y	.....	.....	.....
SYSTEM—60 CYCLES										
1	3	C.G.E. Co.	8,000	1	24,000	Y	△	1	C.G.E. Co.	8,000
1	3	C.G.E. Co.	4,000	1	12,000	Y	△	1	C.G.E. Co.	4,000
2	6	S.Co. of C.	750	1	4,500	Y	△	1	S.Co. of C.	750
SYSTEM—60 CYCLES										
3	3	C.W. Co.	3,000	3	9,000	Y	△	.....	.....	.....
1	3	C.G.E. Co.	100	1	300	△	△	.....	.....	.....
1	1	C.G.E. Co.	100	1	100	..	..	.....	.....	.....
2	2	C.G.E. Co.	4,500	3	9,000	Y	△	.....	.....	.....
4	4	C.W. Co.	1,125	3	4,500	Y	Y	.....	.....	.....
{1	1	C.G.E. Co.	300	3	300	Y	△	1	C.G.E. Co.	300
	1	C.G.E. Co.	750	3	750	Y	△	.....	.....	.....
	3	C.W. Co.	3,750	3	11,250	Y	△	.....	.....	.....
	1	C.G.E. Co.	750	3	750	Y	△	.....	.....	.....
	1	C.G.E. Co.	300	3	300	Y	△	.....	.....	.....
1	3	C.G.E. Co.	200	1	600	△	△	.....	.....	.....
2	2	C.G.E. Co.	1,875	3	3,750	Y	△	.....	.....	.....

TABLE OF TRANSFORMING STATION

Station				Circuits			
System number	Name	Date placed in operation	Type of building	High voltage		Low voltage	
				Volts	No.	Volts	No.
CENTRAL ONTARIO AND TRENT							
C 20	Peterboro trans. sta.....	1912 <i>k</i>	spec. met. frame	6,600	4	2,400	9
C 22	Newcastle trans. sta.....	1911 <i>k</i>	brick special....	44,000	1	2,400	1
C 23	Bowmanville trans. sta.....	1912 <i>k</i>	brick special..	44,000	1	2,400	3
C 24	Oshawa trans. sta.....	1911 <i>k</i>	brick special	44,000	1	4,160	7
C 25	Millbrook trans. sta.....	1912 <i>k</i>	.....	44,000	1	2,400	1
C 26	Omemee trans. sta.....	Jan. 17, 1918	outdoor special	44,000	1	4,160	1
C 29	Lindsay trans. sta.....	1912 <i>k</i>	brick special	11,000	2	4,160	2
C 30	Fenelon Falls gen. sta.....	....<i>k</i>	brick special	11,000	2	600	1
C 31	Norwood trans. sta.....	Jan. 12, 1921	S. outdoor mod. special	44,000	1	4,160	2
C 32	Deloro trans. sta.....	1909 <i>k</i>	brick special	44,000	1	600	1
C 33	Madoc trans. sta.....	1909 <i>k</i>	brick special	44,000	1	4,160	4
C 34	Sulphide trans. sta.....	1910 <i>k</i>	brick special	44,000	1	2,400	3
C 36	Pulp Mill trans. sta.....	1909 <i>k</i>	concrete special	44,000	1	2,400	3
C 37	Trenton trans. sta.....	....	brick special	6,600	2	4,160	2
C 38	Belleville trans. sta.....	1910 <i>k</i>	brick special	44,000	1	2,400	6
C 39	Belleville Cement Co.....	1911 <i>k</i>	brick special	44,000	1	600	<i>j</i>
C 40	Point Anne Quarries trans. sta.....	1910 <i>k</i>	brick special	44,000	1	600	4
C 41	Lehigh Cement trans. sta...	1911 <i>k</i>	brick special	44,000	1	600	<i>j</i>
C 42	Deseronto trans. sta.....	1911 <i>k</i>	brick special	44,000	1	2,400	3
C 43	Napanee trans. sta.....	1912 <i>k</i>	brick special	44,000	1	4,160	2
C 44	Kingston trans. sta.....	1917	brick special	44,000	1	2,400	5
C 45	Wellington trans. sta.....	Mar 25, 1919	S. outdoor	44,000	1	4,160	2
C 46	Pictou trans. sta.....	Mar. 6, 1919	S. outdoor	44,000	1	2,400	2
C 47	Marmora trans. sta.....	Dec. 14, 1920	outdoor special	44,000	1	2,400	1
NIPISSING							
Z 1	Nipissing gen. sta.....	1909 <i>k</i>	brick special	22,000	1	2,200	1
Z 2	Powassan dist. sta.....	1909 <i>k</i>	brick special	22,000	1	2,400	1
Z 3	Callander dist. sta.....	1909 <i>k</i>	sheet metal, special	22,000	1	2,200	1
Z 4	North Bay dist. sta.....	1909 <i>k</i>	brick special	22,000	1	2,200	1
Z 98	Reserve equipment.....	Sept. 7, 1921	.....	.....	.....	.....	.....

- a.* Includes one constant-current street-lighting feeder, the property of the municipality.
- b.* Includes two constant-current street-lighting feeders, the property of the municipality.
- c.* Not yet in service on October 31, 1922.
- d.* On construction feeder. Transformers brought from Whirlpool and Montrose.
- e.* Feeders are the property of the municipality.
- f.* Date placed in temporary service, the installation was completed on January 30, 1916.
- g.* Remodelled station.

DETAILS AS OF OCTOBER 31, 1922—Continued

Transformers										
Active							Spare			
No. of banks	No. of units	Make of units	Unit kv-a.	Phase rating of unit	Total kv-a.	Banks connected		Single phase except where otherwise stated		
						H.V.	L.V.	No.	Make	Unit kv-a.

SYSTEM—60 CYCLES—Continued

4	4	C.G.E. Co.	750	3	3,000	Y	△			
1	1	C.G.E. Co.	100	1	100					
2	2	C.G.E. Co.	750	3	1,500	Y	△			
2	2	C.G.E. Co.	1,500	3	3,000	Y	Y	1	C.G.E. Co.	750
2	2	C.G.E. Co.	750	3	1,500	Y	Y			
1	1	C.G.E. Co.	100	1	100					
1	3	M.E. Co...	40	1	120	Y	Y			
2	2	C.G.E. Co.	750	3	1,500	Y	Y			
1	1	C.G.E. Co.	750	3	750	Y	Y			
2	6	C.G.E. Co.	135	1	810	△	△	1	C.G.E. Co.	135
								1	C.G.E. Co.	750
1	1	P.E. Co.	300	3	300	Y	Y			
1	3	C.W. Co.	250	1	750	△	△			
3	3	C.G.E. Co.	300	3	900	Y	Y			
2	2	C.C.W. Co.	240	3	480	Y	△			
2	2	C.W. Co.	1,125	3	2,250	Y	Y			
2	6	C.G.E. Co.	100	1	600	△	Y			
1	1	C.G.E. Co.	750	3	750	△	Y			
3	3	C.G.E. Co.	750	3	2,250	Y	△			
2	2	C.G.E. Co.	750	3	1,500	Y	△			
1	1	C.G.E. Co.	100	1	100					
2	2	C.G.E. Co.	300	3	600	Y	△			
4	4	C.G.E. Co.	750	3	3,000	Y	△			
2	2	C.G.E. Co.	300	3	600	Y	△			
2	2	C.G.E. Co.	300	3	600	Y	Y			
3	3	C.G.E. Co.	750	3	2,250	Y	△			
1	1	C.G.E. Co.	300	3	300	Y	Y			
1	1	C.G.E. Co.	300	3	300	Y	△			
1	1	M.E. Co...	50	1	50					

SYSTEM—60 CYCLES

1	3	P.E. Co...	900	1	2,700	△	△			
1	3	C.G.E. Co.	50	1	150	△	△			
1	2	{A.C.B. C.G.E.	50/ 25/	1	75	V	V			
1	3	C.W. Co.	450	1	1,350	△	△			
.	3	C.W. Co.	300	1	900	22,000	2,200			

- h. Operation taken over by the Hydro-Electric Power Commission in August, 1916.
- i. Temporary.
- j. Feeders, other than those shown, are owned by customers.
- k. Operation taken over by the Hydro-Electric Power Commission in March, 1916.
- l. Transformer good for 50 kv-a. at 44,000 volts.
- m. Voltage rating.
- n. Includes one feeder owned by the municipality.

SECTION V

HYDRAULIC ENGINEERING AND CONSTRUCTION

During the past year much valuable work was initiated and brought to completion by the Hydraulic department. This included the completion of the St. Lawrence River report, which is now before the International Joint Commission for consideration. Steady progress has been made on the Queenston-Chippawa development; four units having been placed in operation, with the prospect of number five being ready shortly.

On the Central Ontario and Trent system, the Ranney Falls development has been completed, and the units put on commercial load.

In addition to these major activities, surveys and hydraulic studies have been made in considerable number, with the result that many valuable data, respecting the regimen and regulation of our provincial rivers have been obtained.

The Commission has, as previously, acted in an advisory capacity to many of the municipalities, in some cases rendering more practical assistance by making surveys and drawing up plans.

These matters are referred to at greater length below.

NIAGARA SYSTEM

QUEENSTON-CHIPPAWA DEVELOPMENT

Hydraulic Construction

The method of procedure for the completion of the canal and power house has been fully described in the report of this department for 1921.

Briefly, the status of the work in November, 1921, was as follows:

At the power house, foundations were in place for three main turbines, with two of the turbines set in position. The building was completed sufficiently to house units Nos. 1 and 2, at that time being erected. Some work had been done in preparing the foundation for No. 4 turbine. The penstock for unit No. 1 was in position and work was proceeding on the erection of penstocks for unit No. 2 and the service units.

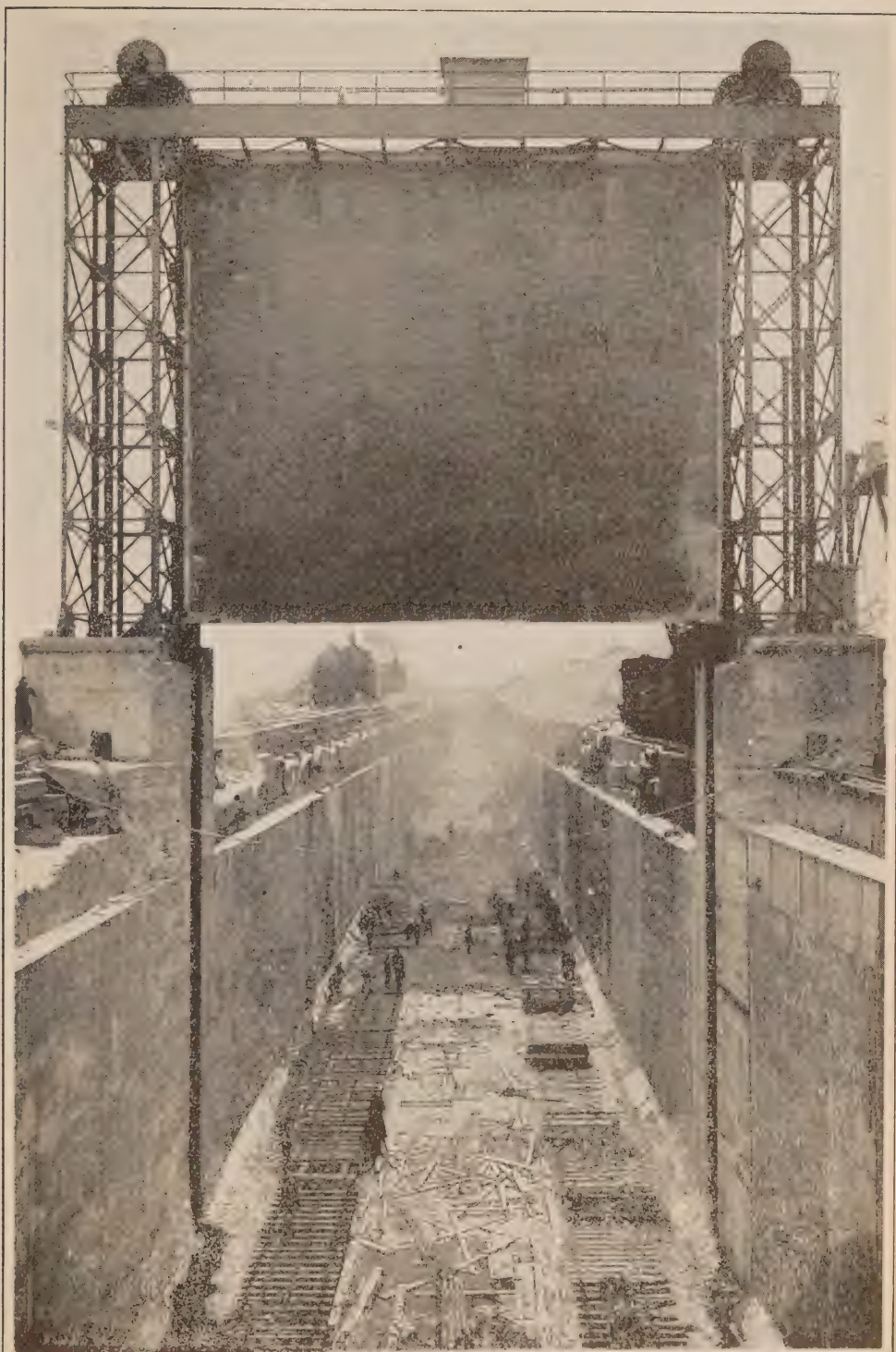
The substructure for the screen-house was practically complete for the nine units, and superstructure erected for six units. The shaft for the main elevator was under construction.

The forebay was complete, except for cleaning-up.

The canal was in an advanced stage of construction. The five large shovels were working on a schedule to complete excavation about the end of November, and these shovels were being followed by scaling operations and six complete lining plants. Practically all of this work was going on in the section between Lundy's Lane and Montrose.

The control-gate at Montrose was being assembled.

The work was in progress on the construction of the double-track bridge crossing the canal on the main line of the Michigan Central railroad at Montrose.



QUEENSTON-CHIPPAWA DEVELOPMENT

Control Gate near Montrose. Men clearing the canal preparatory to admitting water. December 22, 1921

The dredge "Boone" was still working at Chippawa in preparation for the coming year's work.

The work done during the fiscal year 1922 resulted in the completion of the canal; further extension of the power house; river dredging and the construction of the initial installation of the intake at Chippawa.

Power House

During the year covered by this report, the power house was extended to provide for the first five units and the temporary end was under construction to house in this section of the building. Four turbines and Johnson valves were practically complete, and the fifth turbine and valve under construction. All five main penstocks were complete, as was also the service penstock.

Erection was proceeding with the administration building, at the south end of the screen-house, and the placing of structural steel in the main elevator shaft.

On December 24, water was admitted to the canal and forebay, and the power house was officially opened by the turning on of No. 1 unit on December 28, 1921. (See frontispiece.) Units went into commercial operation as follows:

No. 1 unit on January 26, 1922.

No. 2 unit on March 16, 1922.

No. 3 unit on August 11, 1922.

Canal

Excavation of the canal was completed on November 30, 1921; three of the five shovels finishing their assigned work within three days of this date.

The concreting of the floor and walls of the canal was finished on December 21, and immediately thereafter all of the excavating and concreting plants were withdrawn from the canal; about 5,000 tons of construction plant being removed from the lined section of the canal in the five succeeding days.

During the latter stages of the work, the dredge "Hennessey" was working in the vicinity of the dam between the dry section of the canal and that which had been excavated by dredging, and on December 24, 1921, the remainder of the core between the two sections was removed and water was allowed to enter the canal through a small channel, thus supplying water to turn over the first unit at the power house.

Dredging was continued for a month thereafter at this point, in order to provide a sufficient waterway for operation purposes.

Intake and River Section

The dredge "Boone" was shut down on November 8, 1921, having completed its work for the season. By that date the cofferdams, surrounding the site of the intake structure, had been finished and unwatering was commenced.

The site of the intake was completely unwatered and pumps were maintained in operation for about a month. By this time it was proved that the cofferdams were watertight, and it was then decided to discontinue pumping. In the spring, water had risen within the cofferdams to a considerable height, owing to the natural drainage which reached it from the land side.

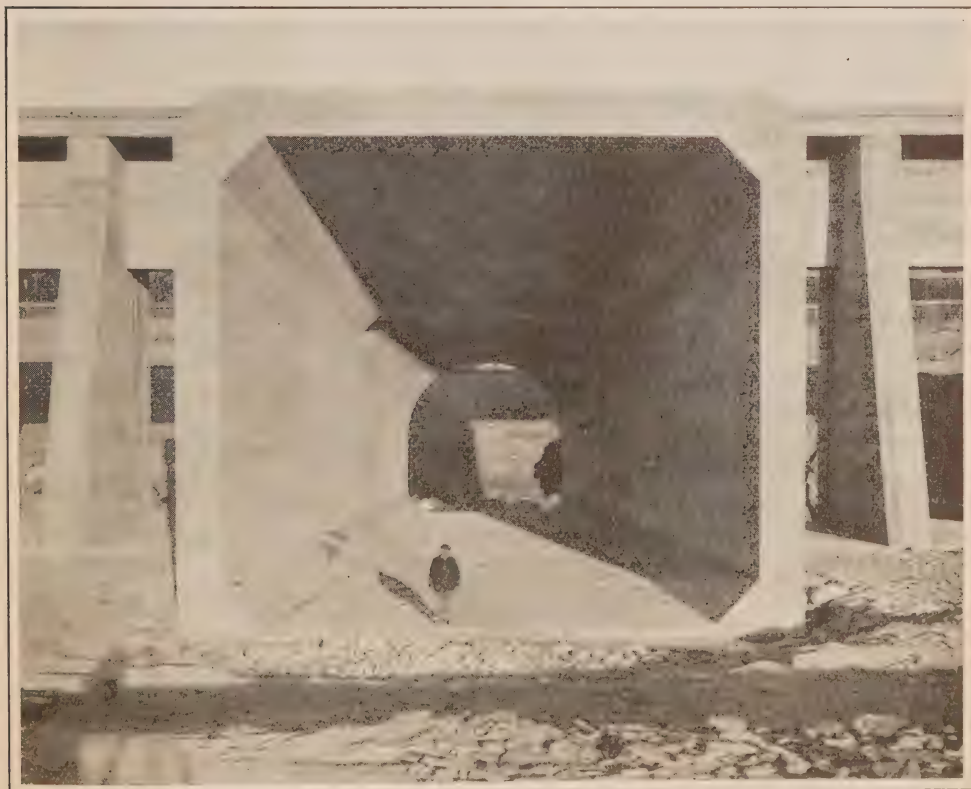
In April, 1922, a contract was let to Messrs. Tomlinson, Macaw and MacDonald, of Winnipeg, for the construction of the intake and ship channel at Chippawa, and active work in connection with this contract was commenced immediately after the final unwatering of the site in April.

This contract comprised the construction of a breast wall parallel to the direction of the flow of the Niagara river, containing six main openings with retaining walls at each end. Between the main structure and the upstream



QUEENSTON-CHIPPAWA DEVELOPMENT

Intake in the Niagara River at Chippawa. Diffuser Openings Nos. 5 to 1. The immense size of these structures may be appreciated by noting the figures of the men and team



QUEENSTON-CHIPPAWA DEVELOPMENT

Intake in the Niagara River at Chippawa. Looking out through No. 4 Inner Diffuser. The mouth of each of these openings measures 36 ft. wide by 32 ft. 9 in. high

shore, there is built a ship channel 80 feet in width, providing for the installation of a single pair of lock gates. The shore of the Niagara river above the ship channel is protected by crib-work for a short distance, and between the intake structure and the standard river section the slopes are protected by hand-laid rip-rap. The whole structure, including the inner basin, occupies an area of about 20 acres.

The work was prosecuted diligently throughout the summer, and the excavation was advanced sufficiently to permit of a start being made on the concrete structure on July 8, 1922.

The contract called for the completion of this work by December 1, 1922, and the progress of the work to date would indicate that the contractor will be able to meet the prescribed schedule in so far as the erection of the structure is concerned, although it is probable that the withdrawal of the sheet-piling in the cofferdam will not be accomplished until some time during the winter.

A contract was awarded in April, 1922, to Messrs. E. O. Leahey and Company, Limited, of Ottawa, for the dredging of the river section and the upper portion of the canal, to provide sufficient waterway for five units. The contractor immediately arranged for the construction of a new hydraulic dredge for this work, delivery of which was promised in July. Construction of this dredge was not carried on with sufficient speed to secure delivery by the date promised, and the contractor was requested to commence excavation using another dredge, which he leased for the purpose. This dredge started work about August 1, and continued during the year.

Parts of the new dredge "Stewart" commenced to arrive at Chippawa in July, and the contractor immediately commenced the installation of the machinery. This dredge was put in commission on October 26, 1922.

The first work undertaken was the removal of the earth in the vicinity of the Michigan Central Railway bridge at Montrose, which had been completed in July, and it is expected that the channel under this bridge will be in use in December, 1922. The dredge will then continue to excavate under the contract, first working in those localities requiring immediate attention.

Bridges

During the past year progress has been made on bridges across the canal. The M.C.R.-G.T.R. Main Line Arch which was completed last year has been backfilled. The M.C.R. Montrose Bridge was completed in August, the steel superstructure having been erected by the Canadian Bridge Company. With reference to the N.S. & T.R. Arch—the barrel of which was completed two years ago by the Commission—a contract was let, late in the summer, for construction of the wing walls, and a start has been made on this work. Contracts for the substructures, flooring and backfilling of the Highway Bridges at Lundys Lane, Portage Road and Thorold Road were let to Messrs. Campbell and Lattimore, and for the steel superstructures to the Canadian Bridge Company. The work was started in June and by the middle of September all the piers and abutments were finished. Since then the Bridge Company has made good progress with the superstructure of the Lundys Lane bridge.

SEVERN SYSTEM

Severn River

A reconnaissance survey and preliminary estimate was made with regard to developing power at Port Severn on the Severn river in conjunction with the

present canal scheme for the purpose of supplying the demand on the Severn system.

This development is situated at the point where the Severn river enters Georgian bay; there being at this location a fall of twelve to fourteen feet. During the canalizing of the river the Department of Railways and Canals placed a concrete dam at this point and installed a lock, leaving the necessary sluiceways for the development of power. The site of the power house is therefore well defined. The power developed at this plant would approximate 2,000 horsepower.

MUSKOKA SYSTEM

Muskoka River

The plant, owned and operated by the Commission and situated on the South branch of the Muskoka river, was purchased by the Commission from the municipality of Gravenhurst in 1914. Since that time an additional unit has been added, but, owing to the continuous and increasing demand from Gravenhurst and the surrounding municipalities, it has been necessary to purchase additional power for distribution from the Bracebridge municipal plant. As this supply is neither dependable enough nor large enough in quantity, it has therefore become necessary to install another pipe line and unit in the South Falls plant. This entails the development of further storage, and plans are now being prepared with the purpose in mind of proceeding with the work at an early date.

ST. LAWRENCE SYSTEM

St. Lawrence River

The Commission's Statement and Engineering Report, dealing with the development of the St. Lawrence river, was submitted to the International Joint Commission at a Public Hearing in Ottawa on November 14 and 15, 1921. The report is based on the surveys and investigations carried on during the past three years, and includes plans and estimates of three alternative schemes of development of the international reach of the river for power and navigation. A great amount of data regarding river discharge and elevation, topographic features, rock elevations, etc., have been collected and plotted. Numerous maps and diagrams on which this information is plotted are now on file in addition to those submitted in the report.

Studies have been continued of systems by which the out-flow from lake Ontario might be regulated in order to benefit power and navigation to the greatest extent possible, and observations have been made of the formation and movement of ice in the river.

THUNDER BAY SYSTEM

Nipigon Development

Owing to the rush schedule on the Nipigon development, and the necessity of producing commercial power by December, 1920, it was found that it would be impossible to complete the concrete dam before the winter season. It was

therefore decided to postpone construction until the following spring. In order, however, that water might be obtained in sufficient supply to operate the two machines installed, it was necessary to build a temporary rock-filled crib dam. This was placed in such a manner that it might be used as a cofferdam during construction of the concrete section which was to be placed a short distance down stream during the coming spring.

During construction of the main dam the flow of the river, over and above that necessary for turbine operation, was discharged through the supply pipes which had been built for future additions to the plant. The dam, which is of the concrete gravity type and built on solid rock, was completed during the latter part of 1921, after which the temporary cofferdam was removed.

The dam having been completed, little remained to be done except the building of the fishway. This was necessary in order to comply with the requirements of the Department of Game and Fisheries that means should be provided for fish to travel up and down the river.

CENTRAL ONTARIO AND TRENT SYSTEM

Ranney Falls Development

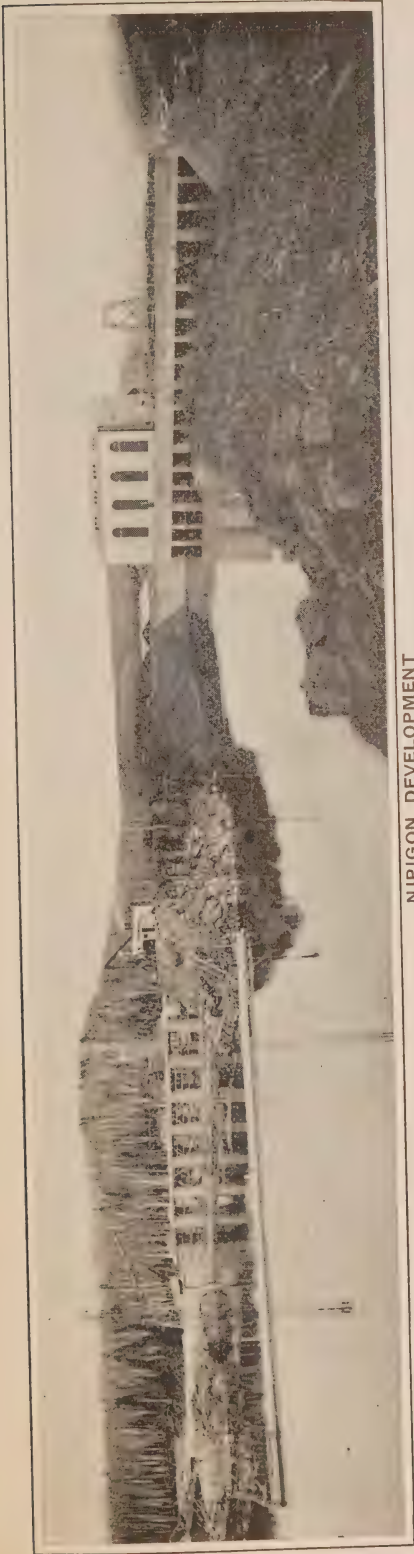
During the year the new development at Ranney Falls was practically brought to completion. The substructure being practically complete at the end of last year, work was begun on the erection of the equipment and superstructure, with the result that power was delivered on the line during the summer of 1922.

The intake for the plant is through sluiceways built by the Department of Railways and Canals at the time the Trent Valley canal was constructed. Through these, water enters the forebay, and thence is conducted to the wheels through concrete supply pipes and scroll cases. The turbines built and designed by the Boving Hydraulic Company, of Lindsay, Ontario, are of the vertical single discharge type, equipped with Moody draft tubes, and develop 5,000 horsepower each under 47-foot head when operating at a speed of 120 rev. per minute. The superstructure of the power house was finished in natural stone excavated from the power-house site, and therefore has an appearance in keeping with its surroundings.

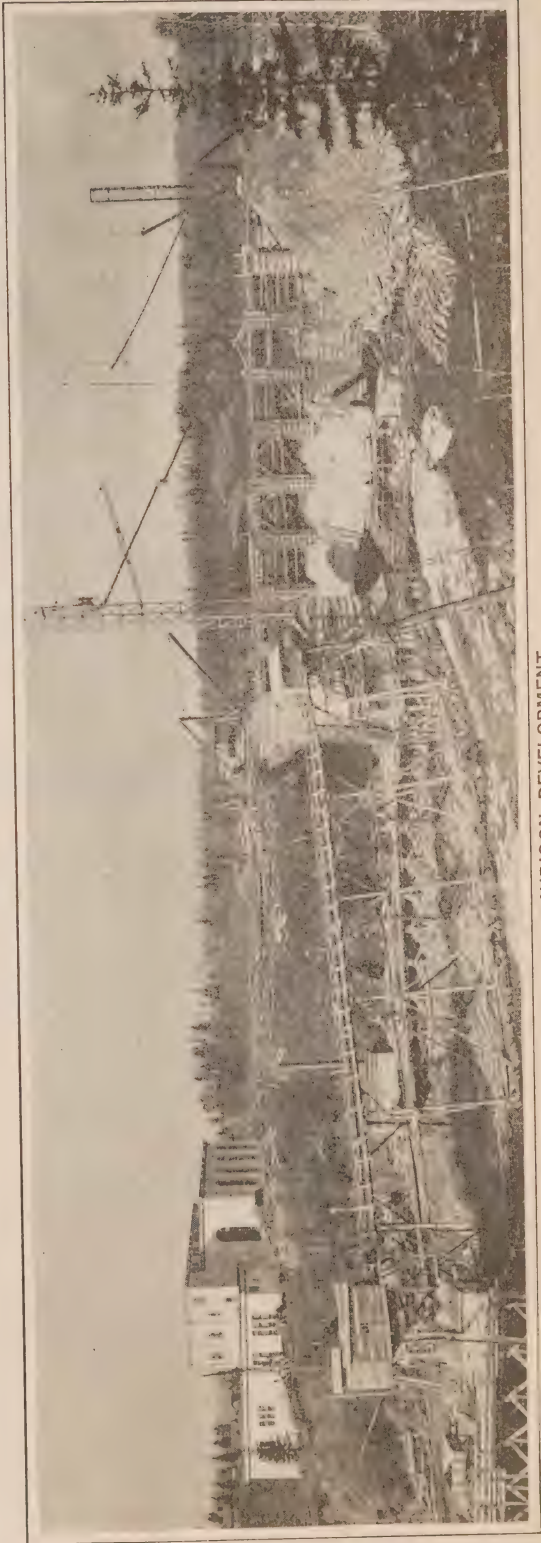
Dams No. 8 and No. 9, Trent River

Owing to the continuously increasing demand for power on the Central Ontario system, it has been almost impossible to keep pace with the requirements of the municipalities, without seriously overloading all available plant. To eliminate this condition, and to provide a reasonable margin of capacity for future needs, plans and estimates have been made for the development of power at Dams No. 8 and No. 9 on the Trent canal, some five miles below Campbellford. At the time the Department of Railways and Canals constructed the waterway, provision was made at these points for future power development, so that any development scheme must be confined within certain prescribed limits and be approved by the Department.

It is proposed to develop Dam No. 8 for approximately 6,600 horsepower, and there is available here a head of about 36 feet. It is proposed to develop from the available head of 24 feet at Dam No. 9, about 4,000 horsepower.



NIPIGON DEVELOPMENT
Power House and Dam from North-West. November 1, 1921



NIPIGON DEVELOPMENT
Power House and Main Dam from East. October 29, 1921

Since these sites are very closely related, it is likely that construction will proceed on both at the same time.

The appropriation for this work has been secured, and construction will be commenced in the spring of 1923.

Trent River

During the past few years the Commission has retained in this district a competent engineer in order that complete studies might be made of the regimen of the Trent river and tributary streams. Stream-flow measurements have been made at various points, and efforts have been made to rate satisfactorily the power houses, in order that reliable flow records might be obtained.

Extensive studies have been made in order to determine the storage available on this river and the control of its flow, and very satisfactory results have been obtained.

Crow River

In order that the flow might be augmented for plants on the Trent river, studies have been made with regard to obtaining storage on the Crow River watershed. With this end in view, a dam was recently constructed at the outlet of Kashabog lake which impounded some 28,000 acre-feet. The investigation is proceeding and it is likely that in the near future further dams will be built on this watershed.

NIPISSING SYSTEM

South River

Owing to the increased demand on the Nipissing system and the ever-growing needs of the district, it was necessary that an additional source of power be obtained. With this end in view, a survey was made and plans drawn up for a possible development at Bingham chute on the South river. This site is near the village of Powassan. The head at the site is approximately 45 feet, permitting of a development of about 1,300 horsepower. An estimate was made and submitted to the Commission and the necessary appropriation having been authorized, construction will proceed as early in the spring of 1923 as weather permits.

MISCELLANEOUS

Aux Sable River

At the request of the municipality of Massey, situated on the Aux Sable river, a tributary of the Spanish river which flows into Georgian bay, a reconnaissance is being made to determine whether a satisfactory hydro-electric development could be made at that point to supply the town. Massey is a growing town near the north shore of the Georgian bay, which is served by the Canadian Pacific railway. Its chief industries are lumbering and the manufacture of pulp. It was considered locally that if there were a possibility of a development in the immediate vicinity, power for local requirements might be made available at reasonable rates.

Saugeen River

Owing to the increased needs of the district, it will be necessary shortly to augment the supply of power in the Eugenia district. With this end in view, a detailed survey was made some years ago of the Saugeen river in the vicinity of lake Huron. This scheme would provide somewhat over 100 feet of head and make possible a development of approximately 12,000 horsepower. Some further investigations will be necessary to establish definitely the feasibility and economy of this scheme.

Seguin River

Following the request of the municipality of Parry Sound, as mentioned in last year's report, further investigations were made with regard to the storage possibilities of the Upper Seguin River watershed. This entailed surveys, both instrumental and reconnaissance in nature, particularly since the municipality had for some time past been in trouble regarding drowned land claims for storage already developed. It was necessary, therefore, to survey and list these claims in order that the municipality might be able to make satisfactory settlement.

St. Mary River

At the request of the municipality of Sault Ste. Marie, a reconnaissance was made of the existing situation with regard to the possibilities of producing additional power from the St. Mary river for the use of the municipality. In connection with this, the Commission's engineers made a survey of the rapids and developed therefrom the contours along the river bank. Based on this survey, a preliminary report is in course of preparation.

Thessalon River

At the request of the municipalities of Thessalon and Bruce Mines, a reconnaissance survey was made of the power possibilities of the Thessalon river, to determine the advisability of developing power thereon for the joint use of both municipalities. A preliminary report was prepared and submitted to the municipalities for their information.

Vermilion River

At the request of the town of Capreol, a reconnaissance was made of the Vermilion river as a possible source of power supply for the municipality. The Vermilion river is a tributary of the Spanish river which flows into Georgian bay and on which good facilities for storage are available. Capreol is a divisional point on the Canadian National Railways system, and the shops for that division are located at this point. The surrounding country is noted for its wood-pulp industries and mineral deposits. The head obtainable at the proposed development is 25 feet, and approximately 650 horsepower could be developed.

SECTION VI

MUNICIPAL WORK

NIAGARA SYSTEM

General engineering assistance in connection with the operation of the local systems was given to the following municipalities:—

Ailsa Craig, Ayr, Barton Township, Beachville, Bolton, Brampton, Brantford, Burford, Burgessville, Caledonia, Chippawa, Clinton, Dashwood, Delaware, Dorchester, Drayton, Drumbo, Dublin, Dundas, Elmira, Fergus, Georgetown, Granton, Hagersville, Harriston, Ingersoll, Listowel, London, Lynden, Markham, Merriton, Milverton, Mitchell, Moorefield, Mount Brydges, New Hamburg, New Toronto, Niagara Falls, Niagara-on-the-Lake, Norwich, Otterville, Palmerston, Paris, Parkhill, Plattsville, Port Colborne, Port Credit, Port Dalhousie, Port Dover, Port Stanley, Princeton, Queenston, Seaforth, Simcoe, Springfield, St. Jacobs, St. Marys, Stamford Township, Strathroy, Tavistock, Thamesford, Thorndale, Thorold, Tillsonburg, Toronto Township, Waterdown, Waterford, Waterloo, Welland, West Lorne, Weston, Woodbridge and Woodstock.

Acton

Assistance was given the municipality in connection with the management of the local system and engineering advice was given regarding extensions to take care of new customers and increasing domestic loads.

Agincourt

General engineering assistance was given in connection with separating the distribution system in the village of Agincourt from the remainder of the township of Scarboro with which it was formerly operated. The village system was placed on a separate and satisfactory operating basis.

Alvinston

The distribution system in Alvinston was reconstructed by the Commission's staff on behalf of the village. A 4,000-volt line was constructed from Watford to Alvinston and the Alvinston system was made alive on March 22, 1922. Assistance was given to the local management in connection with supplying power customers and also in connection with putting the system on a satisfactory operating basis.

Aylmer

Owing to the increased use of domestic appliances during the year, extensions to the distribution system were required. The system originally was designed and installed to take care of a lighting load and the power requirements at that time. Engineering assistance was given to the local Public Utilities commission in connection with the extensions to the system and in matters of operation.

Belle River Village

By-laws for \$13,500 were passed by this village on July 13, 1922, and work was commenced by the Commission's staff on the building of the street lighting and distribution system. Sufficient contracts were secured to put the system on a paying basis from the start.

Plans were completed for a 26,400-volt line from Essex station to the village, and arrangements were made for the construction of an outdoor-type station at Belle River. It is anticipated that power can be supplied about December, 1922.

Burford

During the past few years the municipality of Burford has been considerably extending its system. In 1922 it became necessary to issue additional debentures for \$4,000, to take care of extensions. Engineering assistance was given to the municipality in connection with this work.

Chippawa

Engineering assistance was given to the municipality regarding increased transformer capacity on its distribution system and also regarding various matters in connection with the operation of the system.

Dutton

During the year assistance was given to the local system management in connection with extensions required to handle electric range loads in the village, and also from time to time with the operation of the system.

Embro

Assistance was given to the local management in connection with the obtaining of a contract to supply the local chopping and flour mill with electric power and the making of an extension to serve the plant. From time to time the local management was guided in the handling of the system.

Etobicoke Township

The distribution system was greatly extended during the year, general supervision and engineering assistance being given in connection with this work. Additional debentures amounting to \$30,000 were issued by the township to provide for the new construction.

Exeter

Engineering service during the year was given the local management re the necessary changes to their distribution system to take care of domestic appliances installed in the municipality.

Ford City

This municipality was originally supplied by a system constructed by the Hydro-Electric Power Commission and operated by Walkerville. It was deemed desirable, however, to make arrangements for Ford City to finance its own system.

By-laws for \$63,000 were submitted on January 2, 1922, and the system was purchased by the municipality from the Hydro-Electric Power Commission and from the municipality of Walkerville. A contract was arranged with the Commission and arrangements were made for power to be supplied through the Walkerville substation.

Forest

On April 9, 1922, the Forest distributing station and the Forest system was changed from 2,200 to 4,000 volts, and additional station equipment installed to supply the village of Thedford.

Galt

The new office building and substation was completed and formally opened on July 28, 1922. It is located in the centre of the city and is, therefore, advantageously situated both from a distribution and service standpoint. The building and equipment is modern in all respects, all switching being electrically operated by remote control from the operating room. This station receives all the power used by the city at 13,200 volts, and, in addition to the 2,200-volt feeders, has two outgoing 13,200-volt lines to local substations.

The office part of the building has, in addition to the general office, a large display and storeroom for domestic appliances. An extensive merchandising business is carried on for the benefit of the consumers and a wiring department is also maintained to complete the service which is supplied.

Goderich

Additional demands for power necessitated some changes in the system to supply a large elevator company and a number of other large consumers. Assistance in connection with plans, etc., was given by the Hydro-Electric Power Commission.

Hensall

Assistance was given to the local superintendent respecting a few extensions to improve the local service and also to improve the power-factor of the distribution system. Advice was also given in connection with matters pertaining to the operation of the local system.

Hespeler

The changes in the distribution system referred to in the 1921 report have been practically completed. The general increase in power load and the increased use of domestic appliances has necessitated increasing the capacity of the transformers in the local substation.

Kitchener

Conferences have been held with the engineers of the Commission in regard to new stations and circuits to supply the ever increasing loads. Considerable changes and revisions have been made in the distribution system in addition to new lines on King Street East.

Lambeth

As the local village distribution system required changes to provide better service for domestic loads, the Trustee Board of the village requested assistance to make the necessary changes. The services of an expert lineman were secured to overhaul the distribution system in general and improve the service.

Lucan

During the year engineering assistance was given the local commission respecting extensions to the local distribution system to improve the domestic service in the village, these extensions being necessary as a result of the larger use of domestic appliances. Matters of local management were taken up from time to time during the year.

Merlin

A by-law was passed on January 2, 1922, and plans were completed for the rebuilding of the street lighting and distribution system. The building of a 26,000-volt line from the Fletcher tap on the Tilbury line to Fletcher was arranged for; also the construction of an outdoor-type station at Fletcher and a 4,000-volt line to be constructed from the station to Merlin. Power will be supplied to the Ontario Farmers Drainage Company at Fletcher for its brick and tile works. Power will be available early in December.

Milton

Estimates were prepared and arrangements made for extending the system to supply additional customers. Engineering advice was also given in connection with proposed betterments to the system to take care of domestic service.

Mimico

Assistance was given in connection with betterments and extensions to the distribution system and with the issue of \$20,000 debentures to provide both for serving additional customers and for the provision of heavier lines and equipment made necessary by the additional use, on a large scale, of ranges and other domestic appliances.

Niagara Falls

To provide for the large increase in power consumption during the year, due chiefly to large growth in domestic uses, it became necessary to increase the substation capacity and also that of the lines. Engineering assistance was given to the municipality and debentures were issued by it to the extent of \$100,000 for this work.

Port Colborne

Engineering assistance was given to this municipality on account of the extensive reconstruction of its distribution system necessitated by the heavy increase of domestic use of power. Debentures to the extent of \$14,000 are being issued to cover this work and to provide for a rapidly increasing load.

Port Dalhousie

Owing to the fact that the municipality's distribution system was becoming old it became necessary to spend a considerable amount of money on its maintenance in order to bring it up to standard construction. Approximately \$5,000 was spent on this work and on the many necessary extensions and increases to transformer capacity.

Port Dover

Engineering assistance was given to this municipality in obtaining an increased number of consumers on its system.

Preston

The distribution system was changed from 2,200 to 4,000 volts and new circuits erected in order to facilitate the removing of all poles from the main street. Plans were prepared for the remodelling and completion of the distribution system, made necessary by the steady increase in load of power customers and domestic users.

Riverside

This municipality was originally supplied by a system constructed by the Hydro-Electric Power Commission and operated by Walkerville. It was considered desirable, however, to make arrangements for Riverside to finance its own system.

By-laws for \$29,500 were submitted on January 2, 1922, and the system was purchased from the Hydro-Electric Power Commission and from the municipality of Walkerville. A contract for power was entered into with the Commission and arrangements were made to construct a 4,000-volt feeder from Walkerville distributing station to supply not only the town of Riverside but also Tecumseh and St. Clair Beach. Power will be supplied on the standard Hydro basis about November 1, 1922.

Rodney

Assistance was given to the local management with an extension to serve a power consumer. Assistance was also given from time to time in connection with the operation and management of the system.

St. Clair Beach

By-laws were submitted on January 2, 1922, for \$6,500, for the building of a new distribution system. A contract for power was entered into with the Hydro-Electric Power Commission. The new distribution system was constructed for the municipality by the Walkerville Hydro system, and arrangements made to supply power about November 1, 1922.

St. Thomas

Engineering assistance was given to the local commission from time to time during the year on extensions to the local system, including an extension to the Michigan Central Railway plant where a 375-horsepower synchronous motor is to be installed in the coming year as well as additional 13,200-volt transformer capacity.

Assistance was given the local commission in connection with changes in the waterworks' feeder, and changes in the station and extensions.

Scarboro Township

Supervision was kept over the numerous extensions and betterments to the distribution system necessary to provide service to many additional customers.

Money and enabling by-laws were passed providing for the management as a separate unit, and on the same basis as an urban municipality, of that portion of the distribution system lying within a defined area in the southern part of the township. Estimates were prepared covering the cost of the distribution system so set apart.

Stratford

The increasing demand for current, especially for domestic appliances, was responsible for the request by the municipality for assistance in purchasing additional station equipment. Plans are being prepared for changing from 2,300 volts delta to 2,300 volts "Y" and a 1,500-kv-a. transformer has been ordered for the local substation. The Appliance department, which has been carried on successfully during the year, has rendered a much needed service. as shown by the volume of sales.

Tecumseh

This municipality was originally supplied by a system constructed by the Hydro-Electric Power Commission and operated by Walkerville. It was considered desirable, however, to make arrangements for Tecumseh to finance its own system.

By-laws for \$18,500 were submitted on January 2, 1922, and the system was purchased from the Commission and from the municipality of Walkerville. A contract for power was entered into with the Hydro-Electric Power Commission and arrangements were made to construct a 4,000-volt feeder from Walkerville distributing station to supply Tecumseh, Riverside and St. Clair Beach. Power will be supplied on the standard Hydro basis about November 1, 1922.

Thedford

A 4,000-volt line from Forest to Thedford was constructed by the Hydro-Electric Power Commission and the local distribution system was remodelled and put into operation on May 18, 1922. Assistance was given to the local management to put the system on a satisfactory operating basis, a number of good power customers being secured.

Thorold

During the year the municipality installed a 100-kw., 2,300-volt, 3-phase, 25-cycle generator to replace the old single-phase, 60-cycle unit. The new generator is now being used to suppress the peak on the municipality's system. This generator is operated by water power on the old Welland canal, which power has been used by the municipality for some years. To provide for this new plant and also for extensions to its distribution system, additional debentures to the extent of \$5,000 were issued by the municipality.

Wallaceburg

A contract was entered into with the Dominion Sugar Company for the supply of power for the operation of its electric furnaces. Power was formerly generated by the company itself by the operation of large gas engines. The 26,000-volt line from Wallaceburg Junction to Wallaceburg was double circuited and an extension was made to the plant of the company. Power was first taken by the company on March 1, 1922.

Wellesley

Assistance was requested in connection with increasing the capacity of the local system. Some extensions were made and the secondary systems enlarged and improved.

York Township

As a preliminary to taking over the portion of the distribution system of the Toronto and Niagara Power Company lying in the township a complete inventory and valuation was made of this system. A valuation was also made of the distribution lines of the Toronto Suburban Railway system in the township.

Numerous estimates were checked and street lighting and power rates set for extensions to the existing distribution system, which belongs to the township and is operated for it by the Toronto Hydro-Electric system.

Zurich

An investigation of the service to the local flour and chopping mill was made. Assistance was also given to the local management during the year.

NIAGARA SYSTEM—RURAL*

Beamsville Rural Power District

As a result of meetings held in Grimsby, Beamsville, Vineland, Jordan Station, Campden and Tintern, approximately 300 contracts have been obtained. About 50 miles of line is now being constructed to give service to these parties. This work involved the construction of a 12,000-volt line from St. Catharines to Beamsville and Grimsby, at which points substations are being constructed to take care of this load. This district is developing very rapidly, especially in small fruit farms and the canning industry. Service will be available early in the coming year.

Belle River Rural Power District

Public meetings were held in this district in the latter part of 1921 and the early part of 1922, and local committees, canvassing in the district after the meetings, obtained contracts sufficient to build 16 miles of line to serve 35 farm contracts and 72 hamlet contracts. Construction work is proceeding by the Commission's staff, and power will be supplied in December of this year from the new distributing station which is being constructed at Belle River.

***NOTE:**—In the descriptions of work carried on in the rural districts of the various systems there are references to certain classes of rural consumers. These classes of service are described as follows:

Class I: Hamlet service includes service in hamlets, where four or more customers are served from one transformer. This class excludes farmers and power users. Service is given under three sub-classes as follows.

1-A: Service to residences where the installation does not exceed six lighting outlets or twelve sockets. Use of appliances over 600 watts is not permitted under this class.

1-B: Service to residences with more than six lighting outlets or twelve sockets, and stores. Use of appliances over 750 watts permanently installed is not permitted under this class.

1-C: Service to residences with electric range or permanently installed appliances greater than 750 watts.

Special or Unusual loads will be treated specially.

Class II-A: House Lighting—Includes all contracts where residences cannot be grouped as in Class I. This class excludes farmers and power users.

Class II-B: House Lighting—Includes lighting of small farms that cannot be grouped as in hamlets. This will include power for miscellaneous small equipment and single-phase motors not to exceed 2-horsepower, or an electric range. Range and motor not to be used simultaneously.

Class III: Light Farm Service—Includes lighting of farm buildings, power for miscellaneous small equipment, power for single-phase motors, not to exceed 3-horsepower demand, or electric range. Range and motors are not to be used simultaneously.

Class IV: Medium Single-Phase Farm Service—Includes lighting of farm buildings and power for miscellaneous small equipment, power for single-phase motors, up to 5-horsepower demand, or electric range. Range and motor are not to be used simultaneously.

Class V: Medium 3-Phase Farm Service—Includes lighting of farm buildings and power for miscellaneous small equipment, power for 3-phase motors, up to 5-horsepower demand, or electric range. Range and motor are not to be used simultaneously.

Class VI: Heavy Farm Service—Includes lighting of farm buildings and power for miscellaneous small equipment, power for motors up to 5-horsepower demand, and electric range, or 10-horsepower demand without electric range.

Class VII: Special Farm Service—Includes lighting of farm buildings, power for miscellaneous small equipment, power for 3-phase motors from 10- to 20-horsepower demand, and electric range.

Class VIII: Syndicate Outfits—Includes any of the foregoing classes which may join in the use of a syndicate outfit, provided the summation of their relative class demand ratings is equal to the kilowatt capacity of the syndicate.

Brant Rural Power District

During the year 7 miles of line was constructed in this district on which approximately 80 consumers will receive service. These lines are feeders from the present Brantford township system.

Chatham Rural Power District

Rural meetings were held in the district in the summer and fall of 1921 and sufficient contracts obtained to build 23 miles of line to supply 70 farm contracts and 24 hamlet contracts. Power was first turned on to these lines May 5, 1922, by an extension of the distributing lines of the Chatham Hydro-Electric system, power being metered at the city limits. These lines were constructed for the Commission by the Chatham Hydro-Electric system, which also looks after the operation. Additional contracts are being signed and it is expected that at least 10 miles of line will be added to the system during the coming year.

Chippawa Rural Power District

An underground line was constructed from Chippawa to Stevensville, a distance of 8.45 miles, to give service to 59 consumers of class 1, 3 of class 2, 14 of class 3, and 2 of class 7. This line was made alive on July 11, 1922. A request has also been made by the township of Bertie to construct a street lighting system in Stevensville, with 25 100-watt lamps. Operation is being taken care of by Stamford Township system.

Delaware Rural Power District

Public meetings were held in this district and assistance was given in securing contracts which enabled the Commission to construct 10.5 miles of rural line to serve 24 farm and 34 hamlet contracts in the hamlet of Melbourne and the rural vicinity. Sufficient contracts have been secured to permit the building of a line to Komoka and east on the third concession of Lobo township, approximately 8 miles in length. It is expected that the necessary agreement will be signed with the township and that this line will be built during 1923. The operation of this system is looked after by the Commission.

Dorchester Rural Power District

Public meetings were held in this district and assistance was given in securing contracts which enabled the Commission to construct 28 miles of line to serve 121 hamlet and 97 farm contracts. Actual construction was commenced on November 1, 1921, and completed on May 1, 1922. Estimates were prepared on street lighting for the police village of Belmont.

Drumbo Rural Power District

Meetings were held in Drumbo, Princeton, Bright and Wolverton, as a result of which 65 contracts have been obtained, 48 of which are consumers of class 1, 9 of class 3, and 8 of class 4. In all, 7.05 miles of line were constructed, and were made alive on August 10, 1922.

Exeter Rural Power District

Meetings were held in the township of Stephen and the cost to serve the rural users with electric current on 20-year contracts was fully explained. After the necessary contracts were obtained, an investigation into the local conditions was made in the field. Arrangements were made to construct a distribution system to serve 128 rural consumers, 25 of which were farmers and 103 hamlet consumers, during the last half of the year. As street lighting was required

in the township, estimates of the cost and the rates to serve, as well as the procedure to be followed as per Part II (a) covering street lighting in townships were explained to those interested. After the requirements were carefully carried out as per the Act, the street lighting system was installed in Crediton and Centralia. Arrangements were made for the operation of the local system so that good service could be obtained at as low an expense as possible.

Galt Rural Power District

The district was started in North Dumfries township by lines on the east and west river road south to Galt approximately three miles in extent, serving 18 customers. These lines are operated for the Commission by the Galt Public Utilities Commission.

Jordan Rural Power District

As a result of meetings held in the district, service was given on May 20, 1922, to 23 hamlet consumers and 1 farm consumer on $1\frac{1}{2}$ miles of line. Additional farm contracts numbering 24 have been obtained in the district and approximately 7 miles of line are being constructed to give service to these prospective customers.

London Rural Power District

Public meetings were held in this district and assistance was given in securing contracts which resulted in the building of 5 miles of line to serve 17 hamlet and 11 farm contracts. This work was commenced on October 9, 1922, and will be completed before the end of November, 1922. It is expected that approximately 10 miles of line will be added to this district during 1923. This district, in conjunction with the Dorchester Rural Power District, is operated by the Hydro-Electric Power Commission, thus keeping the operating costs at a minimum.

London Township—Voted Area

An investigation was made of the conditions in the Broughdale district to take care of extensions to serve additional consumers. Changes were made in the primary construction at the Thames River bridge, as requested by the Township Council, and the capacity of the primary lines was increased. Estimates were prepared and arrangements made for the issuing of additional debentures by the township to take care of this work.

Lynden Rural Power District

An underground line was constructed from Lynden substation to Jerseyville, a distance of 5.5 miles, to give service to 21 consumers of class 1, 13 of class 3, and 1 of class 4. This line was made alive on February 9, 1922. It is expected that during the coming summer, as a result of meetings held in this district, a line will be extended north from Lynden to Sheffield, a distance of approximately 8 miles, to give service to 20 farmers and to 15 hamlet consumers.

Niagara Rural Power District

Service was given to this line on January 18, 1922, to 7 consumers of class 3, 3 of class 4, and 2 of class 7. As a result of meetings held in the district, it is expected that lines will be constructed to give service to approximately 25 consumers of class 3, and 30 hamlet consumers.

Preston Rural Power District

The original Preston Rural district, which consisted of a line from Preston high-tension station to Breslau, has been increased by the acquisition of the Blair and Doon systems and by an extension to Freeport and Centreville. Sufficient contracts have been received to warrant the extension of the Preston-Breslau line to Bridgeport and Bloomingdale. This system now consists of 15 miles of line serving 140 customers. It is expected that another line will be built towards New Germany. When this is completed, the township of Waterloo will have Hydro lines practically throughout the entire township. This rural district is operated by the Commission, a local superintendent being employed.

Ridgetown Rural Power District

Public meetings were held in the district in the years 1920-21 and sufficient contracts were obtained to warrant the building of 24 miles of line to serve 55 farm consumers and 67 hamlet consumers. These lines were constructed by the Construction department of the Commission and power turned on to the lines on March 10, 1922, by connecting to the Highgate 4,000 volt feeder supplied from the Commission's distributing station at Ridgetown.

Included in this district is the street lighting and distributing system in Rondeau Provincial park, the street lighting system consisting of 57 100-watt standard street lamps. This part of the district was put in operation in July, 1922.

St. Jacobs Rural Power District

A line has been built from the St. Jacobs station to the village of Conestogo. There are at the present time 52 consumers on approximately 3 miles of line. This line is operated by the Commission, the superintendent of the Preston Rural Power district being employed.

Saltfleet Rural Power District

On February 14, 1922, the lines in the Saltfleet rural power district were made alive and service is now being given to nearly 600 consumers. This rural power district is being operated by the Commission and an operating staff is located at Stony Creek.

Sandwich Rural Power District

Meetings were held in the years 1921-22 and sufficient contracts were obtained to warrant the construction of $5\frac{1}{2}$ miles of line to supply 7 farm contracts and 28 hamlet contracts. Construction work was carried on for the Commission by the Windsor Hydro-Electric system and the Walkerville Hydro-Electric system, power being supplied by each of the respective systems to the lines in their vicinity. Power was turned on to these lines in August, 1922.

Simcoe Rural Power District

As a result of meetings held in Port Dover, 5 class 3 consumers were attached to the Simcoe-Port Dover line. It is expected that during the coming year service will be given to a large number of summer cottages west of Port Dover as well as to the Regal Poultry Feed Company, who will require approximately 30 horsepower. During the year rural meetings were held in the townships of Stamford, Humberstone, Crowland, Thorold, Pelham, Grantham, Louth, Clinton and Woodhouse.

Stamford Rural Power District

During the year a line was constructed from the Stamford Hydro-Electric System line westward on Lundy's Lane to serve the hamlets of Allanburg and the Beaverboard industrial sub-division, to give service to 123 consumers of class 1, 6 of class 3 and 1 of class 2. Approximately 6.5 miles of line was constructed. A request has also been made by the township of Thorold that a street lighting system be erected in Allanburg. This system is being operated by the Commission by the Stamford township system.

Tavistock Rural Power District

Sufficient contracts have been received to warrant the building of rural lines from Tavistock to Shakespeare, a distance of 3 miles, to serve 40 customers. The construction work has been commenced and it is expected service will be given soon.

Wallaceburg Rural Power District

Public meetings were held in the years 1921-22, and canvassing for contracts undertaken by local committees. Contracts were obtained for 15 miles of line for 42 farm contracts and 18 hamlet contracts; also 2 power contracts of 30 horsepower each for power to two large drainage schemes. Construction work was undertaken by the Wallaceburg Hydro-Electric system on behalf of the Hydro-Electric Power Commission and it is expected power will be supplied early in 1923.

Welland Rural Power District

A line approximately one-half mile in length was constructed to give service to 38 hamlet consumers and was made alive on April 14, 1922.

Woodstock Rural Power District

Public meetings were held in this district and as a result of the efforts of the committees appointed at these meetings sufficient contracts were obtained to warrant the construction of 56 miles of rural line to serve 152 farmers and 74 hamlet consumers. Construction was commenced in this district on July 17, 1922, and it is expected that it will be completed by the end of the year. Eight street lights were installed in Innerkip and it is likely that this number will be increased during the coming year. The operation of this district is taken care of by the Commission, a local superintendent being employed who assists the consumer in every way possible.

ESSEX COUNTY SYSTEM

Extensions were made to the distributing systems in the towns on this system and heavier capacity supplied to take care of additional consumers and of the increased use of electricity caused by the more extensive use of domestic appliances.

Additions to the street lighting system were made in the town of Kingsville and preliminary investigations were made and a scheme was submitted to the council in Leamington for an ornamental lighting system in the business section.

Changes were made in the distributing system in the town of Essex so that primary lines and transformers were taken off the main street in the business section. This action greatly improved the appearance of the street.

SEVERN SYSTEM

As has been customary in the past years, engineering assistance of a general nature was rendered to all of the municipalities comprising this system. The local officials of the various towns were advised concerning the construction of extensions to distributing lines; service to new customers; the application of rates; the soliciting of new customers and installations on the premises of same; the purchasing of proper types of equipment; and in all matters pertaining to detailed operation. The operating statements of each individual system were analyzed for the purpose of ascertaining the accuracy of existing rates and the revision of such, if necessary. This assistance was given the following municipalities: Alliston, Barrie, Beeton, Bradford, Coldwater, Collingwood, Cookstown, Creemore, Elmvale, Midland, Penetanguishene, Port McNichol, Stayner, Thornton, Tottenham, Victoria Harbour, and Waubauskene.

The combined demands of the Severn System municipalities having become such during the year as to require the entire capacity of the Big Chute generating station, additional power plant capacity was found to be necessary to supply future demands, and an investigation was made to determine the most feasible source of such supply. This investigation involved a study of the possibility of increasing the output at the Big Chute plant by replacing the existing units with others of greater output; or, the construction of a development at Port Severn at the mouth of the Severn river at Georgian bay and operating the same in parallel with the Big Chute plant; or, connection to the Muskoka system by means of a transmission line between the South Falls generating station and Waubauskene or Coldwater—additional power to be obtained by constructing an extension to the power house at that location—or, a connection to the Niagara system through the Eugenia lines between Mount Forest and Harriston; or, a second pipe line at the Eugenia development. Any one of these possibilities would provide for the extra power requirements of the Severn system. The merits of these various methods of securing an additional supply of power are still being considered, but it is anticipated that a decision will be made at once and construction undertaken early next year. As a temporary means of providing for the power requirements of the district until such time as the permanent arrangements have been completed, an agreement for the period of one year was executed with the town of Orillia whereby a guarantee of 800 horsepower was secured from the town covering the delivery of this amount of power to the Big Chute generating station. A meeting was held at Barrie on July 25, at which representatives of all the Severn System municipalities were present, as well as several of the Commission's staff, to discuss any and all matters of a general nature pertaining to the operation of the system, such as rates, cost of power, details of administration, etc. At this meeting an Association was formed to be known as "The Association of Municipalities of the Severn System." Officers for the coming year for carrying on the work of the Association were elected at this meeting.

Collingwood

A considerable increase in the demand of this municipality during the year, amounting to approximately 30 per cent. over last year, has been obtained, and there is every indication that the local system will soon recover from the industrial slump which occurred at the close of the War. A new substation was provided and equipped by the local Utility with the assistance of the Commission, for the supply of power to an industry manufacturing electric castings

for the general trade, three 300-kv-a. transformers were installed by the Commission for this station. The power is used for the purpose of operating an electric furnace. This Company's property was formerly used as a large munition plant during the War. The Shipyard and Dry Dock and other large industries are also beginning to utilize previously established demands. These loads, together with the demands of a new industry recently secured by the town, will enable the local system to recover completely the load of previous years.

Midland

A contract was executed between the Commission and the Grand Trunk Railway of Montreal covering the supply of approximately 1,000 horsepower to the company's elevator located in this municipality in the portion known as Tiffin. To serve this customer, approximately 2,000 feet of 22,000-volt line was constructed, as well as a brick substation equipped with a bank of three 400-kv-a. transformers together with the necessary switching and protective equipment. Arrangements were completed during the year by the local system with the assistance of the Commission for serving a large flour mill. This customer is taking about 600 horsepower and is being served at 22,000 volts through its own substation.

SEVERN SYSTEM—RURAL

Following up the efforts of previous years in connection with rural service to various townships served from the Severn system, public meetings were held at different locations, committees organized and assistance given to the various committees which had previously been appointed. Meetings were held at Cookstown and Thornton for Essa township, and at Glencairn, Everett and Lisle for Tossorontio township. Additional work was performed in Innisfil township and investigations were made covering service at various points located within the township boundaries. A meeting was held with the council of the township of Medonte and all details in connection with rural service were explained, covering service out of Coldwater station. Special work was performed in other townships throughout the system, details of which are given throughout this report.

Flos Township

Various public meetings were held in this township at Phelpston and Elm-vale, especially covering service to rural customers in the hamlet of Phelpston and the vicinity, and a canvass of this district resulted in securing approximately 20 contracts. Estimates and rates were prepared and submitted to the local officials.

Nottawasaga Township

The rural line out of Collingwood station for serving this township, the construction of which was begun last year, was completed during the current year and service is now being given to 56 customers. Additional customers have been added from time to time throughout the year, and extensions to the original line were made at various points.

Oro Township

Following up the preliminary work performed in this township during past years in connection with rural service, an agreement was executed between the township council and the Commission covering general distribution of power within the township limits, but more particularly for service to the summer resort district in the vicinity of Shanty Bay, 25 individual contracts having

been signed between the township and consumers. Approval covering the capital expenditure for this work has already been given and construction of the necessary lines for serving the various customers will be undertaken early next spring. It is anticipated that a considerable farm load will develop from this initial installation.

Sunnidale Township

Having obtained an insufficient number of contracts, both at Wasaga Beach and in the vicinity of Stayner, it was found impossible to proceed with the construction of rural lines in the township during the current year. A further canvass has been made, however, and revised estimates prepared, and approximately 50 additional contracts secured. A delegation from the district discussed details of service with the Commission covering the erection of all poles for the Wasaga Beach line. With the revised rates on the basis of this tender, there is every indication of the construction of the Wasaga Beach line being undertaken early next spring, with service given to approximately 105 contracts (total number of contracts signed to date). It is also anticipated that this number of customers will be increased to approximately 200 as soon as the lines are completed and service is available. Whereas this line will be constructed primarily for serving the summer resort district at Wasaga Beach, and whereas all the contracts signed to date cover summer cottages, there is no doubt but that a large number of farmers will avail themselves of the opportunity of taking power from this line as soon as its construction has been completed.

EUGENIA SYSTEM

Engineering assistance pertaining to operation in general was given to the various municipalities of this system throughout the year. The local officials of the individual systems were advised on matters concerning rates, extensions to distributing lines, the soliciting of new business, the installation of proper types of equipment, and details pertaining thereto. Special attention was given to several new towns added to the system last year. The operating statements of the various local systems were analyzed to determine the necessity of rate revision where such was found to be necessary. This assistance was given to the following municipalities: Arthur, Chatsworth, Chesley, Dundalk, Durham, Elmwood, Flesherton, Grand Valley, Hanover, Holstein, Kincardine, Lucknow, Markdale, Mount Forest, Neustadt, Orangeville, Owen Sound, Priceville, Ripley, Shelburne, Tara, Teeswater and Wingham.

An investigation was made covering the purchase of the system now owned by Mr. J. M. Deagle, of Orangeville, including a development located near the forks of the Credit river, and serving the villages of Alton and Erin, and part of the town of Orangeville. A power survey was made of the district served by this company with the idea of ascertaining the possible demands of other municipalities in the vicinity, in addition to the demands of the three previously mentioned, and also to ascertain the possibilities of serving various industries located in the district. After holding various conferences and giving the matter very careful consideration, it was decided that it would be impossible for the Commission to purchase this system and operate it for the benefit of the various municipalities adjacent to the development, as the possible demands for power were insufficient to warrant the purchase price plus the capital necessary to rebuild and reconstruct the plant.

A meeting was held at Durham on May 15, at which representatives of all the municipalities on the Eugenia system were present, as well as represen-

tatives of the Commission's staff, to discuss matters pertaining to the cost of power and the basis on which such cost was determined, as well as matters pertaining to the operation of the development and the transmission of power to the various municipalities served by the system. At this meeting an association was formed known as the "Association of the Eugenia System Municipalities," an executive committee was appointed and officers duly elected for the coming year.

An investigation was made to determine the possibility of securing additional power for the Eugenia system, various schemes being considered such as the construction of a transmission line between the nearest point on the Niagara system at Harriston and Mount Forest, and the installation of a frequency changer set at the latter point; the construction of a development on the Saugeen river near Port Elgin; and the construction of a second pipe line at the Eugenia plant, bringing the output of same up to 8,000 horsepower. A decision has not yet been made concerning these various schemes and the investigation will continue until sufficient data is available for the Commission to form conclusions as to which one of the three will be adopted. As far as can be ascertained at the present time, however, in all probability the second pipe line will be installed some time during the coming year.

Durham

A new outdoor-type substation was constructed, on property formerly owned by the National Portland Cement Company, consisting of three 100-kv-a. transformers with the necessary switching and protective equipment for the purpose of serving a customer requiring between 300 horsepower and 400 horsepower at that location. This industry was started on a small scale two or three years ago and has been the means of greatly increasing the power demand of the town, and has completely compensated for the loss of the National Portland Cement Company's load.

Meaford

Revised rates and estimates were prepared and submitted covering delivery of hydro-electric power to this municipality. The valuation of the local system previously prepared was checked and various meetings were held with the town council for the purpose of devising some means of making settlement with the local privately-owned system now serving the town, so that same could be acquired and the municipality served with Hydro power from the Eugenia plant. To serve the town with Hydro power, an extension of the transmission lines to Meaford would be required, together with the construction of a stepping-down station suitable for delivering the power at distribution voltage. An enabling by-law was submitted to the ratepayers qualified to vote thereon at the last January elections and was carried by a large majority. A money by-law authorizing a debenture issue to cover the purchase of the local system and the rebuilding of same will be submitted to the ratepayers at the coming January elections.

Paisley

Estimates and rates were prepared and submitted covering the delivery of Hydro power to this municipality and every possible assistance was rendered to the local officials in completing arrangements accordingly.

It is proposed to construct a 4,000-volt line out of Chesley to Paisley capable of serving rural customers desirous of obtaining electrical energy for farm purposes. As soon as a sufficient number of contracts are obtained in Paisley to guarantee the revenue required to pay the cost of service, a transmission line will be constructed.

Walkerton

Arrangements were completed for serving the Hanover Cement & Stone Company's quarry, located near the town of Walkerton, and formerly the property of the Commission. The Commission retained possession of the substation for the purpose of making use of it as a distributing centre for rural power requirements in the adjacent district as well as to supply power to the company.

EUGENIA SYSTEM—RURAL

Following up the work performed in various townships throughout the Eugenia system during the past years, assistance was rendered to the various townships in the preparation of estimates and rates, the holding of public meetings, discussions with various local officials, the formation of committees to carry on local investigation and in all matters pertaining to rural service. This assistance was given specially to the following townships: Arran, Derby, Elderslie, Egremont and Howick.

Artemesia Township

Arrangements were made for serving the hamlet of Ceylon by an extension of the primary lines out of the village of Flesherton. A new contract, based on recent legislation, was executed between the township and the Commission, and 16 contracts were executed between individual customers and the township. This extension was placed in service on February 23. Arrangements were also completed for reconstructing the distributing lines in the hamlet of Eugenia, and approval was given covering the necessary capital expenditure for carrying on the work. The reconstruction of these lines will be undertaken early next year.

Brant Township

The construction of approximately $1\frac{1}{4}$ miles of rural line in this township was completed for serving four farms in the vicinity of the Walkerton quarry substation and power was first delivered to these customers on February 15, 1922.

WASDELLS SYSTEM

At various times throughout the year engineering assistance and advice was given to the municipalities of the Wasdells system, on operating matters, on matters pertaining to rates, on extensions to distributing systems, concerning service to important individual customers, and in all matters pertaining to management and administration. Operating statements of the various local systems were analyzed to determine the necessity of rate revision where required. This assistance was given to the following municipalities: Beaverton, Brechin, Cannington, Sunderland and Woodville.

The lines of this system were extended south from Cannington to serve the municipalities of Port Perry and Uxbridge and the rural communities adjacent thereto, details of which are given elsewhere in this report.

Port Perry

A distributing system was designed for this municipality and the reconstruction of the existing system was undertaken by the local officials with the assistance of the Commission. This municipality receives its service from an extension of the Wasdells lines south from Cannington to a substation at Greenbank and power was first delivered during the month of October.

Uxbridge

A distribution system was constructed in this municipality by the local officials with the assistance of the Commission, and arrangements completed for receiving power from the extension of the Wasdells system south of Cannington with a substation at Greenbank. Hydro power was delivered to this municipality in October and assistance was given to the local officials in various matters pertaining to operation under the new conditions.

WASDELLS SYSTEM—RURAL

As in previous years considerable work was performed in the rural districts adjacent to the Wasdells system and forming a part thereof, such as submitting information at public meetings and making explanation to the various township councils and farmers interested concerning rates and the method of obtaining service. The townships for which this work was performed are as follows: Brock, Elgin, Mariposa, Reach, Scott and Thorah.

Mariposa Township

Various estimates and rates were prepared and submitted to prospective customers in this township and several meetings were held in the district and all matters pertaining to rural service carefully explained. It is anticipated that in the near future a line will be constructed in this township to serve rural customers as well as the villages of Little Britain and Mariposa.

Reach Township

A number of contracts were obtained in the hamlet of Greenbank adjacent to the substation constructed for the purpose of serving the municipalities of Uxbridge and Port Perry. The hamlet of Greenbank and the rural customers adjacent thereto will be served from the low-tension lines feeding the above mentioned municipalities out of Greenbank station. The approval for the government bonus and for the expenditure covering the construction of rural lines has been received and the construction work will be undertaken early next year. Various estimates and rates were prepared covering service to a number of farmers in the township adjacent to the town of Uxbridge and it is expected that several of these customers will take advantage of the existing low-tension line serving this municipality at the present time and will probably become connected during the coming year.

Thorah Township

A large summer resort load has been built up in this municipality adjacent to the town of Beaverton and operated by the local officials. Several extensions were made to the rural lines in this township throughout the year and a large number of new services added. At the present time approximately 84 customers located in the township outside of the municipality of Beaverton are being served from this rural system.

MUSKOKA SYSTEM

Engineering assistance and advice was rendered throughout the year to the municipalities of Gravenhurst and Huntsville, which receive service from this system. The operating statements of the two municipalities were analyzed to determine the necessity of rate revision and the equity of existing rates. The loads in both municipalities have grown to such an extent that the capacity

of the generating station has been reached and an investigation is in progress covering the construction of an extension to the development as well as the construction of a transmission line connecting the Muskoka system with the Severn system.

ST. LAWRENCE SYSTEM

Radical changes were made on the system during the year, to provide for the growth of load. Changes in the high-tension station at Cornwall were completed, increasing the capacity up to 15,000 kv-a. The station is now amply large enough to meet a considerable growth in load. During the spring and summer of 1922, the transmission lines were altered, so as to enable the system to operate at 44,000 volts, and at the end of the year the voltage on the system was changed from 26,000 to 44,000 volts. This work required changes in several stations, and the construction of a new station at Morrisburg to step down the power required north of Morrisburg from 44,000 to 26,000 volts. This is the only portion of the system now operating at 26,000 volts.

The Commission contracted during the year with the Eugene Phillips Electrical Works, Limited, for a supply of power at Brockville, to operate its plant, which was undergoing construction at this point. The contract calls for delivery of 1,100 horsepower, which may be increased up to a maximum of 3,000 horsepower.

The Cornwall Pulp and Paper Company ceased operations in its plant in December, 1921, and has not yet resumed.

Alexandria

Assistance was given to this municipality on several occasions, in connection with obtaining additional power consumers. The demand for power for this system for 1922 has increased approximately 60 per cent over the demand taken in 1921, due to increased demand of additional power and lighting consumers.

Apple Hill

The demand of this police village for 1922 shows an increase of over 200 per cent over the demand taken in 1921, due to increase in the number of lighting consumers and a power load.

Avonmore

During the year several meetings were held in the vicinity of Avonmore, for the purpose of obtaining the co-operation of rural residents, to link up the rural supply with the requirements of the police village, but no results have been obtained as yet. Assistance was given the police trustees in obtaining contracts for service from residents of the police village, but sufficient contracts were not obtained to justify the police trustees in proceeding with the project of obtaining a supply of power, without the rural district in this vicinity joining in a plan of extending lines to serve it.

Aultsville

Both by-laws were carried by the ratepayers of this police village in January, 1921, and it was proposed to erect a small substation at a point near the village, to meet the requirements of the village, and adjacent territory.

Assistance was given the police trustees in obtaining contracts for service from residents of the village, but sufficient contracts were not obtained to ensure revenue to meet cost, and consequently further action was deferred.

Cardinal

Requests were received from the council of the village for estimates on the cost of power and a distribution system. The plan proposed was to supply the requirements of this municipality from a substation erected within the village, at a point on the existing high-tension line. Estimates on cost of power and distribution system were submitted to the municipality, and an engineering report was furnished its officials on the value of the present plant.

Casselman

In order to obtain the co-operation of the rural district, to link up with this municipality, public meetings were held during the year in this rural district, but the interest of the rural residents was not obtained, and consequently the project of supplying power to the village of Casselman was deferred, as sufficient demand could not be obtained in the village itself to warrant an extension from Maxville.

Chesterville

A large part of the power sold in this municipality is delivered to a Condensed Milk Company, and in spite of the prevailing depression in the marketing of such products, the Company's demands for power have maintained. An effort is being made to build up a load in the district around the municipality and to extend the service to other municipalities east of the village, in order to effect a reduction in the cost of delivering the power.

Finch

By-laws for supply of Hydro power were submitted to the ratepayers in January, 1921, and carried with a large majority. It was proposed to supply this village from a low-tension line from Chesterville, and to have the rural community along the line receive service. Some work has been done to obtain this, and further effort will be made to find an economical way of serving the municipality.

Lancaster

Assistance was given to the officials of this village in obtaining additional consumers on the system, and also in obtaining the interest of rural residents in the vicinity to take service from extensions to the Lancaster system. The demand of this municipality is about 200 per cent more for 1922 than for 1921.

Martintown

The number of lighting consumers has been increased during 1922, but no power consumers have contracted for service. The power required by this police village has increased about 250 per cent in 1922.

Maxville

The demand of this village shows an increase of about 100 per cent over the demand for 1921. There was a gradual increase in the number of lighting consumers, but no increase in the number of power users during the year. Assistance was given to this municipality respecting additional power consumers.

Newington

This municipality passed by-laws for Hydro service in January, 1921, and it was proposed to supply the police village from an extension from Finch, but no action was taken during the year.

South Lancaster

A request was received from the police trustees for an estimate on the cost of power and a distribution system. Both estimates were submitted, but further action was not taken by the trustees on account of the possibility of an insufficient number of residents taking service. Arrangements have been completed whereby those residents who want service are to be supplied as part of the Martintown rural district.

St. Isadore de Prescott

By-laws for Hydro power were carried by the ratepayers of this police village in January, 1921, but further action was deferred, pending the co-operation of the rural residents in extending a line to this municipality and the village of Casselman.

Williamsburg

The service from the small transformer substation erected to supply this municipality has been satisfactory, and an improvement over the preceding year, when a serious interruption occurred.

Winchester

The demand of this municipality is practically the same as for 1921. There was an increase in the number of lighting consumers, but no increase in power consumers.

Winchester Springs

Further action was deferred concerning a supply of power to this police village, pending the decision of the rural residents to enter into the scheme. Some preliminary plans were prepared on a scheme to erect a small special transformer station which would serve the village, but would not permit of extending service to the adjoining rural community.

ST. LAWRENCE SYSTEM—RURAL

During the year preliminary engineering was carried on in established rural districts, as well as in rural districts not established.

Work in the following approved rural districts on the St. Lawrence system was taken up:

Alexandria District

Public meetings were held in this district in 1921, but no requests were received for further information in 1922.

Apple Hill District

Several public meetings were held during the year in this district, at which a representative from the Commission was present to explain the basis on which power is distributed to rural residents.

Chesterville District

Rural residents in this district have been receiving a supply since April, 1921, and during 1922 there was an extension of the line to supply additional farmers. A readjustment of rates was also made, in order to make them conform to a scheme now adopted throughout all rural sections.

Maxville District

Several public meetings were attended by a representative of the Commission.

Prescott District

This district is now being supplied with power out of Prescott substation by the Commission. This district includes the village of Spencerville, in which there are 44 consumers, and since the advent of Hydro, a new sash and door factory has been erected, which will use about 20 horsepower. A number of farmers in the vicinity are now using Hydro power.

In response to a petition, estimates have been submitted for street lighting in Spencerville.

RIDEAU SYSTEM

The amount of power taken by the Rideau system has shown a considerable increase during the year 1922. The municipalities of Kemptville and Lanark have been added to the system, and the Grenville Crushed Rock Co. has contracted with the Commission for a supply of power for the next three years. The various industrial plants in the other municipalities have maintained their loads, and there has been the usual normal increase in the lighting and appliance service in all the municipalities on the system. Only a small portion of the power required was purchased from the Rideau Power Company. The greater part of the load was met by the Commission's plant at High Falls.

The financial statement of the system reflects the results of this increase in the sale of power and the loading of a generating plant.

Carleton Place

Improvements have been carried out on the distribution system in Carleton Place, and all primary wires and old construction have been removed from the main street. Owing to the increasing power load, demand meters have now been installed on all power consumers, resulting in a much more efficient check of sale of power, particularly in the large woollen mills in this town.

Grenville Crushed Rock Company

This company has contracted with the Commission for a maximum of 800 horsepower for a period of three years. The company has been taking power since May, 1922, and is using approximately 600 horsepower at present. This plant is closed through the months of the winter season.

Kemptville

The village of Kemptville was added to the system during this year, and to date has shown most satisfactory results. In addition to a good lighting load, the village is selling a considerable amount of power. The village is now enjoying a more efficient form of electric service than was ever experienced under old conditions, the improvement in street lighting being most marked.

Lanark

This village was added to the system during the last month of 1921, and has secured 107 consumers, and everything points to a successful year's operation. There is only a small demand for power during the day.

Perth

The power requirements in Perth have remained steady throughout the year. With prevailing rates, the municipality continues to show large surpluses in annual operation of the utility.

Smiths Falls

The load in this municipality has been increasing. Many new consumers have been connected to the system. Considerable economy in the local operation of this municipality has been effected during the year.

THUNDER BAY SYSTEM

The development at Cameron Falls on the Nipigon river, placed in operation last year, has given entire satisfaction and has provided ample power for the municipality of Port Arthur throughout the year. Advice and assistance was rendered to the Local Commission of Port Arthur in connection with serving certain large power customers. The load has been growing very rapidly in the municipality of Port Arthur and there is every indication that additional capacity will be required at the Nipigon development in a short time. Information was submitted to various large power customers in the city of Fort William concerning Hydro-Electric service from the Nipigon development, and a special effort was made to secure new business for the Thunder Bay system in that municipality. Negotiations were begun with the Kaministiquia Power Company concerning the interchange of power for emergency purposes between the two cities, and it is expected that an agreement will be completed for this purpose early next year. An illustrated pamphlet entitled "The Nipigon Hydro-Electric Power Development Constructed and Operated for the Municipalities of the Thunder Bay District by the Hydro-Electric Power Commission of Ontario," was prepared by the Commission and distributed. This pamphlet gives a history of the inauguration and growth of Hydro power in the Thunder Bay district and of the negotiations with the municipalities of Port Arthur and Fort William in connection therewith. It also contains a complete description of the Nipigon development and directs attention to the advantages of the Twin Cities as a field for manufacturers and others who might contemplate residence there.

OTTAWA SYSTEM

There is considerable increase in the use of power in the city of Ottawa. In anticipating the growth of load, the city of Ottawa asked for a reservation of two more blocks of power, of 500 horsepower each, to be delivered in the autumn of 1922. Later it was realized that this would not meet its requirements, and an additional block was ordered. The municipality is now using approximately 12,000 horsepower out of the total of 20,000 horsepower reserved under the agreement with the Ottawa and Hull Power Company. The increased use of electrical energy in the municipality is chiefly due to requirements for domestic purposes. At the rate at which the power demand is now being increased, it is evident that shortly an additional source of supply will have to be provided.

Nepean Rural Power District

This is a rural district supplying the farmers of Nepean township with light and power. It was first put into operation in the early part of the year, after the construction of several miles of line. Since operation began, a number of extensions have been made, until now approximately 100 customers are being served from 24 miles of line. The power is delivered to this district by the city of Ottawa, from its distribution system.

A number of additional extensions are anticipated, and efforts are being made to extend the lines to serve some neighbouring hamlets and urban municipalities.

CENTRAL ONTARIO AND TRENT SYSTEM*

Bath

Estimates are being prepared for service to the village of Bath by a line extension from Napanee substation.

Bloomfield

The Bloomfield Milling Company has installed 35 horsepower in motors, replacing steam power.

An extension has been constructed to serve a private line built by six farmers residing on the outskirts of the village.

Bowmanville

An extension of the local distributing system of two miles was erected to serve the summer cottages at Bowmanville-on-the-Lake. In connection with this, a three-phase, 2,200-volt submarine cable was laid across the harbour.

Brighton

Estimates were submitted for the construction of lines to serve summer cottages at the Provincial Government park at Presqu'Île Point.

Campbellford

The pulp mill at Campbellford was reopened on September 11, after a period of inactivity due to poor market conditions. The mill is operating at full capacity and has orders ahead for some weeks.

Cobourg

Estimates were submitted for the installation of ornamental street lighting in the business district and the removal of poles and overhead wires from this section.

Water and Gas Departments

In connection with the installation of permanent paving on certain streets, the Commission renewed water and gas services in the streets affected and also increased the capacity of mains.

Havelock

A 20-horsepower power customer has been secured.

Lindsay

The distribution system in the south end of the town is being rebuilt and the street lighting system improved. A number of arc lamps are being replaced by a larger number of incandescent lamps. The greater proportion of this work was completed this season, although the reconstruction will not be entirely completed until next year.

Provincial Plowing Match

The Commission gave a demonstration of appliances and electrically operated farm machinery at the provincial plowing match. This exhibit was very popular with visitors.

Marmora

The Marmora commission is now selling 18 horsepower on the off-peak basis.

* See footnote on page 43.

Newcastle

Service was supplied to a number of rural customers by means of branch circuits from the 2,200-volt feeder connecting the distribution system in Orono with the Newcastle substation.

Norwood

The number of lighting consumers has increased from 185 to 215. The power load has increased from 20 horsepower to 75 horsepower, with the immediate prospect of more power load.

Oshawa

The Corporation has ordered the installation of 130 additional 100 c.p. street lights. It is proposed to operate these lights from pole type regulators.

Gas Plant

A new water-gas generating equipment was placed in operation early in the year and is operating with marked economy. An extensive programme of enlargements and additions to mains was carried out. A highly successful publicity campaign has resulted in a large increase in gas consumption.

Peterboro

The utilities commission carried out a heavy reconstruction program to provide for cooking and appliance loads in the east side of the city. A debenture issue of \$60,000 was approved by the Hydro-Electric Power Commission.

Estimates were submitted on the cost of a new substation to be erected on property purchased some time ago by the utilities commission.

Gas Plant

New mains were laid on a large number of streets and larger mains were installed in other sections where the demand had outgrown the capacity of the existing mains. Numerous alterations and betterments were completed in the gas plant in order to cope with the steadily increasing output of gas.

Picton

The distribution system on Main Street was rebuilt, using western cedar poles, and presents a greatly improved appearance.

Port Hope

A new pole line was constructed from the substation to the centre of distribution. Two three-phase, primary circuits were erected on these poles and the local circuits are being rearranged so that the large power loads will be on a separate circuit from the lighting.

Trenton

A portion of the new ornamental street lighting system was completed. The entire system will be completed before January 1, 1923. The lights installed are 600 c.p. gas filled, operating at 20 amps. on a series system. The standards are cast iron. The total installation consists of 48 lamps. A new 20-k.w. pole-type regulator has been installed to operate 36 units, the remainder being supplied from the existing regulator at the substation.

Warkworth

Estimates were prepared and submitted to the police village of Warkworth for the supply of 20 horsepower from a step-down station on the high-tension line connecting Healey Falls and Trenton. The police village will vote on the necessary by-laws early in December. The station, if constructed, will enable the Commission to serve a large and prosperous rural district which cannot be economically served from any existing station.

CENTRAL ONTARIO AND TRENT SYSTEM—RURAL

Rates based on the provisions of the Rural Hydro-Electric Distribution Act were sent out to the following townships, following requests from the municipal Councils: Loughborough, Portland, Kingston, Ernestown, South Fredericksburg, North Fredericksburg, Belmont, Smith, Seymour and Hungerford.

Public meetings were held in the following townships: Darlington, Hamilton, Haldimand, Sidney, Hallowell, Loughborough, Portland, Kingston, Ernestown, Ameliasburg and Seymour.

At all these meetings committees were formed for canvassing and a large number of contracts have since been signed; but in only one case, viz., Kingston township, have sufficient contracts been obtained to warrant the construction of the lines. In Kingston township a system of about three miles of primary line serving the hamlet of Cataragui and vicinity is now under construction.

Estimates have been made covering a 44,000-volt line extension to Harrow-smith with provision for a substation at that point and distribution lines at 6,600 volts to supply neighbouring municipalities, mines and rural consumers. Rates have been submitted to all concerned and a canvass of the rural district is proceeding.

NIPISSING SYSTEM

This system comprises the municipalities of Callander, North Bay and Powassan, as well as the small hamlet of Nipissing. The demands for power throughout this district have become such that additional development was found necessary, in consequence of which arrangements were completed for the installation of an additional development at Bingham Chutes. Plans have been completed and the approval of the Commission has been obtained for making the necessary expenditure and proceeding with the work so as to have it completed about the middle of next year. The first unit of the new development will increase the capacity of the Nipissing system by approximately 600 horsepower. Provision is being made for installing an additional new unit of similar capacity when required. The improvements effected by the Commission by providing increased storage on the watershed of the South river with the addition of Bingham Chutes development will enable the Commission to supply power to this district without using the North Bay steam plant, consequently, it has been decided to dismantle this and dispose of the equipment. Arrangements were completed for additional extensions to the North Bay distributing system and for rebuilding a large portion to take care of the increased demand, both for domestic and power customers. The station at Callander was enlarged and extended and additional capacity was provided for serving energy to an additional power customer.

NEW ONTARIO DISTRICT

Considerable assistance was rendered to various municipalities throughout this district which have not yet executed an agreement with the Commission for hydro-electric service, but which have availed themselves of the advice of the Commission in the solution of their various local power problems. Matters pertaining to new power developments and the providing of suitable distribution systems were given consideration by the Commission and reports made to the various municipalities. This work was performed for the municipalities of Bruce Mines, Capreol, Massey and Thessalon.

SECTION VII

ELECTRIC RAILWAYS

This section of the Fifteenth Annual Report dealing with the activities of the Railway department has, for convenience, been divided into four main sub-divisions, as follows:

1. Discussion of certain aspects of procedure in connection with municipal Hydro-electric railways.
2. Record of reports made to municipalities.
3. Report on work done during the year in connection with railways now under operation.
4. Financial statement and statistics of railways operated by the Commission.

GENERAL DISCUSSION

The Commission believes that a brief statement may profitably be presented respecting the electric railways work which has been carried out on behalf of municipalities. The presentation of such a statement has been contemplated for some time. Owing, however, to numerous and extensive changes in conditions affecting the general electric railway situation—some of which conditions are still in an unsettled state,—it is impracticable at this date to present a statement as full as it may be possible to present on some other occasion.

First of all, it is desirable to correct a few misapprehensions. During the past year or so, a number of charges have been made against the railway activities and certain programmes of municipalities in connection with Hydro-electric railways. Criticisms, made both from the public platform and through the public press, have occasioned a large amount of misunderstanding and confusion in the minds of citizens of the Province of Ontario respecting the general operations of the Commission with regard to municipal electric railways. These criticisms, in a number of instances, have been most unfair, and the Commission has been more or less placed on the defensive and frequently has not been in a position adequately to correct the misunderstandings which have been created.

Prominent among the unjustifiable impressions which have been left in the mind of the public are those which have been caused by three main misrepresentations, as follows:

First: It has been charged that the Commission definitely recommended a complete network of electric railway lines for construction throughout the Province,—it being represented that 3,500 miles of railway work was planned at a cost aggregating \$200,000,000.

Second: It has been charged that the proposed publicly-owned hydro-electric railways in many cases would parallel and compete with the publicly-owned Canadian National Railways, thereby resulting in financial loss to all concerned.

Third: It has been charged that the Commission has forced its railway projects upon reluctant municipalities and has even sought to attain this object by unwarranted propaganda.

Such charges cannot be justified as, indeed, will be fully evidenced from the following brief discussion:

First: The statement made to the effect that the Commission had planned a provincial-wide railway system aggregating in cost some \$200,000,000, has time and again been authoritatively denied by the Chairman of the Commission. The statement, in some minds, may have originated through attention being drawn to the fact that the Commission had received requests from various municipalities to make preliminary investigations respecting portions of railways—aggregating some 3,500 miles—which some citizens in the municipalities had thought might possibly and advantageously be constructed. In whatever manner the error has arisen there has been no justification whatsoever for repeating the statement after its erroneous character had once been fully declared.

The Commission plans and builds electric railways under authority from the Government of Ontario. A fuller setting forth of this authority is given later in the introduction to the report presenting the reports made to municipalities. It is only necessary here to state that until the municipalities through which the proposed road is to pass formally request by resolution in Council that the Commission investigate and report, no railway is reported upon or investigated by the Commission.

After a report has been requested by, and made to, a municipality, it by no means follows that the Commission will recommend the building of the proposed road. Recommendation favouring a new project is only made when the facts and conditions are found to be favourable for its success, and after a full knowledge of the financial responsibility involved has been conveyed to the municipality and after its ratepayers have voted in favour of the project.

As evidence of the conservative policy followed by the Commission it may be cited that out of the 3,500 miles of suggested lines upon which reports have been requested and surveys made, the Commission has only recommended projects embracing a total of 326 miles, about 60 per cent of which mileage is already in operation.

Second: With reference to the charge that the publicly-owned Hydro lines will duplicate and compete with the publicly-owned federal lines, it is necessary to refer to certain prominent changes in general railway conditions.

At the end of the Great War, it was found that a new railway situation had arisen in the province of Ontario, due to the fact that the Government of Canada was compelled to take over the Canadian Northern Railway, with the probability of later finding it necessary to take over the Grand Trunk system.

In acquiring the Canadian Northern Railways, it was found that the proposed electric railway from Toronto to Bowmanville—already partly constructed—would parallel the proposed Toronto North-eastern Railway. Again, the Canadian Northern Railway system comprised the Toronto Suburban Railway, and this would be paralleled by the proposed new Toronto to London line from Toronto as far as Guelph. In a similar manner, the proposed Welland-Bridgeburg line would serve much of the same territory as the Niagara, St. Catharines and Toronto Railway, a subsidiary of the Canadian Northern Railway.

These three lines, as just intimated, were part of the Canadian Northern Railway system, which had been acquired by the Dominion Government. Owing to the changed status of these railways, it became necessary to consider the advisability of having three publicly-owned municipal electric lines paralleling

the three publicly-owned Dominion electric lines. The whole question was opened for conference between the Dominion, Provincial and Municipal authorities, and as a solution of the problem, the Dominion Government offered to sell the assets of the three electric roads mentioned to the Hydro-Electric Power Commission of Ontario, acting on behalf of the municipalities, for a specified amount. The offer was conditioned upon the Commission agreeing to make an exclusive traffic inter-change with the Canadian National Railways.

The municipalities interested requested that the Toronto to Port Credit section of the proposed line from Toronto to London be united to the proposed electric railway from Port Credit to St. Catharines, thus giving a through line from Toronto to St. Catharines, connecting at St. Catharines with the Niagara, St. Catharines and Toronto railway serving Niagara Falls and other points. For the time being, the portion from Port Credit to London of the proposed Toronto to London line would be abandoned.

A new line was also recommended from Hamilton to Galt from which place connection would be given to Guelph, Preston, Hespeler, Elmira, Waterloo and Kitchener, either by purchase of or by securing running rights over light traffic Grand Trunk branch lines.

The carrying out of these specific proposals involved only a 326-mile system, and this constitutes the extent of the systems finally recommended by the Commission out of its surveys aggregating 3,500 miles. Approximately 200 miles of this 326 miles were already constructed and most of the 200 miles was in operation. It may here be stated that the proposed project was to be a unified system of high-class electric railways giving high speed, frequent service with modern equipment and operating with cheap power. The proposed lines would serve a populous and prosperous territory adjacent to thriving industries. The proposed system would comprise the following:

Niagara, St. Catharines and Toronto Railway—in operation.

Toronto Suburban Railway—in operation.

Toronto Eastern—partly constructed.

Hamilton, Guelph, Elmira—acquisition, running rights and some new construction.

Toronto, St. Catharines Railway—new construction.

In giving an option on its proposed roads as above explained, the Dominion Government evidently did not entertain any fear that the portion of the lines which it was ready to dispose of would be operated in such a manner as to injure the federally-owned roads or rob them of desirable business. As a matter of fact, and looked at in a broad way, the success of the Canadian National Railways is bound up with the general intensive development and growth of the territory they traverse. Upon this development and growth the proposed electric railways would, in the portion of the country they serve, unquestionably exercise a most beneficial influence.

It may further be explained that prominent trunk-line railway men, both throughout the United States and the Dominion of Canada have, on various occasions, publicly stated from the platform, through the press, and while under judicial examination, that short-haul freight and passenger business, which are a particular function of interurban electric railway operation, are handled on trunk roads—with lines and equipment primarily designed for long-distance traffic—not only at a heavy loss, but with the handicap of congesting their through traffic facilities. The recognition of this fact on the part of the administration of the Canadian Northern Railways was doubtless a strong

influence in deciding the administration to be willing to dispose of the railways which they offered to sell. Moreover, it may be added that the federal government was taken into the complete confidence of the Commission in regard to all its electric railway plans. The service of an interurban line supplements, but does not replace, the service of a heavy trunk line railway.

The facts just presented are in direct opposition to the charge made that the Hydro-Electric Power Commission was planning to enter into competition with the Dominion Government railways.

Third: With regard to the charge that the Commission, by unwarranted means, has forced its railway projects upon reluctant municipalities, it may be stated that a charge such as this could only be made by those who willingly disregard the facts.

In the first place, the original legislation of 1913 under which the Commission was empowered to investigate, plan and build electric railways, resulted from specific request made by the largest deputation of municipal representatives that ever appeared before the provincial Government. In 1914, by request of a similar deputation, the Act of 1913 was revised. Up to the end of 1914, resolutions had been received from more than 200 municipalities asking for reports on electric lines, and to date resolutions have been received from an additional 300 municipalities.

Assuredly, in the face of such facts, it must be acknowledged that the whole railway policy of the Commission is the result of a clearly and definitely expressed public opinion demanding that the local transportation system of the Province of Ontario be improved, and that all such improvements and operation of electric railways must be in the hands of a public Commission such as the Hydro.

With respect to the question of propaganda, it is only necessary to state that inasmuch as many of the railway proposals under examination involved technical problems and other considerations which were not readily understandable by many of the citizens interested, it became necessary for some of the Commission's engineers to be present at public meetings and in other ways to explain the plans and estimates, and also to be prepared to answer questions and furnish such supplementary information as local circumstances demanded. The officers of the Commission, whenever so requested, have always rendered similar service in the general public interest upon all matters entrusted to the administration of the Commission.

Representative charges, as commonly made, have now been dealt with. Much more might be said if detailed refutation were attempted but it is believed that sufficient has been said to demonstrate that no justifiable foundation can be found for the charges which have been made.

The Hydro-Electric Power Commission has believed that the municipal hydro-radial project could have been advanced with caution and yet with great benefit to the province as a whole. From its commencement, however, the whole project has been subjected to a very great deal of unfair misrepresentation. It is unnecessary here to enter into a discussion of the aggressive opposition involving a consideration of some of the more technical aspects of the radial railway programme originally proposed by the Hydro-Electric Power Commission. Questions such as the essential difference between trunk steam railway operation and electric railway operation; capital costs of high-grade electric railways such as the Commission proposed to construct; operating costs; possible revenues from local, suburban and interurban passenger and freight traffic; the earning power of electric railways already in operation, and many other features have already been discussed in a Report entitled "*Statement*

respecting Findings and other Statements contained in Majority Report of the Commission—known as the "Sutherland Commission"—appointed to inquire into the subject of Hydro-Electric Railways," which was issued by Sir Adam Beck on the 10th of February, 1922. A copy of this *Statement* will be found on file in government libraries, also in all the public and leading institutional libraries of the Province, thus affording the opportunity for further reference by those interested in the discussion which has centred in the more technical aspects of the proposed hydro-radial programme.

REPORTS MADE ON ELECTRIC RAILWAYS

It has already been stated that upon receiving authoritative request from a municipality, the Commission may examine into and prepare a report upon any specific railway project that may be urged by a municipality or municipalities as of possible general benefit to the communities concerned.

Before presenting brief summaries of the reports that have been made, it is desired to make clear how it is that the Hydro-Electric Power Commission has been acting in the matter of electric railway building, because it has been stated that the Commission has been prosecuting this work without proper authority.

It has been recognized that for many years local transportation in Ontario was far from satisfactory, and the problem of providing adequate transportation facilities between adjacent large centres and, in conjunction therewith, of meeting the transportation needs of smaller towns and of the more densely populated rural areas, has induced public-spirited men in many communities to seek a remedy. That there is a positive need for improved facilities for the interchange of commodities is evidenced by the fact that in Ontario farm produce is frequently allowed to decay on the farm, while the urban populations are paying high prices for similar goods. The prosperity of both city and country depends upon the unhampered interchange of commodities, and both farm and city dwellers should have rapid and frequent access to each other's domain.

The citizens of Ontario had before them the demonstrated success of their municipally-owned Hydro undertaking, in supplying the people of Ontario with electrical power and light "at cost," and all communities recognized that these benefits were actual and had resulted from the co-operative effort of all concerned. It was logical, therefore, for municipalities to enquire whether it would not be possible to build and operate electric railways on a plan corresponding to the Hydro undertaking.

All over the continent examples were found where a single organization was operating both power utilities and electric railroads with general benefit to both, and it was concluded, therefore, that it should be feasible to place under the administration of the successful Hydro Commission the operation of such electric railways as might first be started in connection with a programme for increased and improved electric railway transportation.

With this plan in mind, municipalities requested the provincial Government to empower them to construct and operate electric railways after such projects had been favourably reported upon by the Hydro-Electric Power Commission of Ontario.

In 1913, the Hydro-Electric Railway Act was passed by the provincial legislature. Almost immediately following the enactment of this legislation, numerous resolutions began to come in to the Commission from municipalities asking for reports upon various electric railway projects. In 1914, at the

request of the municipalities concerned, the Act was revised so as to provide that the Commission only could construct and operate the railways.

The work was to be financed by the municipalities issuing their own debentures. These were to be placed with the Hydro-Electric Power Commission, which, in turn, would issue its bonds to the public, employing the municipal debentures as collateral security. After the electric railway programme was first started, various provincial governments expressed a willingness—under the Hydro-Electric Railway Act—to guarantee the bonds of the municipalities. As a consequence, the municipalities naturally felt justified in proceeding upon this basis, believing that the Government was not unsympathetic towards the efforts being made and was willing to strengthen the hands of the municipalities by guaranteeing their bonds.

The policy of the present Government has not followed the line laid down by former administrations under which the electric railway programme was initiated. In 1922, a new Act—The Municipal Electric Railway Act—was passed, repealing the Hydro-Electric Railway Act and cancelling all the radial railway agreements which had been consummated. This new Act, however, exempted the railways which were already being operated by the Commission, namely: Essex District Railway and the Guelph Radial Railway, and certain other proposed railways. The Toronto Suburban and the Toronto and York Railways were covered by special Acts. The new Act required the municipalities interested in the proposed Toronto-St. Catharines Railway to re-affirm their position in regard to the completion of this line. To date 17 of the 20 interested municipalities have passed the required resolutions asking that the road be gone on with. The Niagara, St. Catharines and Toronto Railway was also exempted and may still at some future date be acquired under the old Act.

REPORTS MADE

Toronto-Markham Railway

This report, made in 1914, recommended, as a self-sustaining undertaking, a hundred-mile railway from Toronto eastward through Markham and Stouffville to Newmarket, Uxbridge, Port Perry and Whitby. It was made in response to municipal resolutions and on the authority of the Government. The line was estimated to cost \$3,159,234. It was approved by the electors in 1914, and sanctioned by legislation in 1915, but the agreements were all cancelled by The Municipal Electric Railway Act of 1922.

Ontario West Shore Railway

In accordance with the requests of municipalities interested, and with Government approval, a report was made on this road in 1914. It was partially built by a private company the bonds of which were guaranteed by the municipalities through which the line ran, but the company failed before the work was finished. The Commission found that there was insufficient traffic to warrant the completion of the line and so informed the municipalities. In 1917 further study was made, with the same result, and the Commission recommended that no more action should be taken on the line. The material on hand was then offered for sale.

Aylmer District Railways

A report on several alternative lines in the St. Thomas-Aylmer-Tillsonburg district was made to the municipalities at their request in 1914. As the estimates showed that the lines could not be self-sustaining, the Commission recommended against their construction and nothing further has been done in the matter.

Gravenhurst-Baysville Railway

Reports were made to the municipalities on a line through this district in 1916 and 1917, both of which recommended against the construction of the line due to lack of traffic. No further action has been taken.

Minden District Railway

The municipalities in this district requested a report on a line from Kinmount Junction to Minden. This was presented in 1917 and recommended against the construction of the line as it was estimated that it would not be self-sustaining. No further action is contemplated.

Toronto-London Railway

A report on this railway was requested by the municipalities along the route, in 1914 and 1915. On the authority of the usual Order-in-Council the report was made in the fall of 1915, recommending the construction and equipping of a 137-mile line from Toronto through Port Credit, Milton, Guelph, Kitchener, Stratford, and St. Marys, to London, at a total cost of \$13,734,155. Agreements and by-laws were prepared and were carried by the electors of 23 of the 31 interested municipalities. The agreements were ratified by Act in 1916.

The 1916 Act specified that actual construction should not be undertaken until the conclusion of the war, so that nothing further was done until 1919. In the interim the Dominion Government had taken over the Toronto Suburban which practically paralleled the new line authorized by the electors. The Dominion Cabinet, however, gave the Hydro an option on the Toronto Suburban Railway on behalf of the municipalities, which action would avoid the necessity of raising funds for the new line, which would to a great extent duplicate the service given by the existing electric railway.

The acquisition of the existing Toronto Suburban Railway would not, however, take care of the requirements of the district between Toronto and Port Credit where an improvement in service was urgently required. The conditions were fully explained to the Government and to the municipalities affected, whereupon resolutions were passed by all the councils requesting the Government to authorize the construction of their section of the Toronto-London line as a part of the Port Credit-Hamilton-St. Catharines Railway, which, in the meanwhile, had been definitely authorized, and for which bonds had been issued. The Government then in power agreed to bring in legislation validating such action.

The new 1922 Municipal Electric Railway Act did not cancel the agreements of the six municipalities in the section of the Toronto-London line between Toronto and Port Credit, but authorized the municipalities to proceed with that section provided the councils or the electors reaffirmed the original agreements. Resolutions have been passed by the councils of all six municipalities

which means that these original agreements and debentures, that have been deposited with the Commission, are still legal and binding.

The original agreement voted on by the electors of the city of Toronto in January, 1916, and reaffirmed by the Council in July, 1922, specified that the route of the railway should extend westerly from the foot of Yonge Street to Sunnyside, "using Harbour Board property and private right of way wherever possible." It was therefore necessary to prepare a formal agreement to provide for the transfer of various lands from the city of Toronto to the Commission. Meetings were held with the various interested bodies and after an extended discussion a special agreement was prepared and authorized by the city council of Toronto.

Port Credit-St. Catharines Railway

Resolutions requesting a report on a railway through the Toronto-Hamilton-Niagara district were received in 1915 and 1916. A report was presented to the municipalities in 1916, recommending the construction of a railway from St. Catharines through Hamilton to Port Credit to connect with the proposed Toronto-London line at Port Credit. It was estimated that the cost of constructing and equipping this line, which was about 60 miles in length, would be \$11,360,363. By-laws and agreements were prepared, sanctioned by Order-in-Council, and carried by the electors in 1916 and 1919 in fifteen of the seventeen interested municipalities. As authorized by the Act, the fifteen municipalities agreed by resolutions to assume the share of the two which had not carried their by-laws. An order-in-council authorizing the construction of the line and guaranteeing the Commission's bonds to the above amount was passed on August 8, 1919. Approximately \$500,000 had been spent on right-of-way, etc., by the first of July, 1920, when all further commitments were held up pending the report of an investigating Commission.

The new 1922 Act exempted this line from its provisions and permitted that it be proceeded with under the old Act on condition that the municipalities reaffirm their desire to go on with the work. To the present date nine of the fifteen municipalities have passed the necessary resolutions and the electors in the remaining six will vote at the coming municipal elections.

Essex District Railways

This railway system extends from Tecumseh through Windsor, Sandwich and other towns to Amherstburg, and previous to its purchase by the Commission was operated by the Detroit United Railway. Owing to the many separate franchises great difficulties were encountered by the municipalities in arranging with the company for extensions and betterments. As early as 1915 the Commission's engineers visited Windsor at the request of the city council to assist in various proposals then under consideration. Again in 1917, on requests of the various councils, a valuation of the property was made but the company was not prepared to sell until the expiration of its franchise. In 1918, by vote of the ratepayers, the Commission was again requested to report on the proposed purchase of the line. A report was made early the following year but as the company was still unwilling to dispose of its holding nothing further was done at the time.

Later in the year further resolutions were passed by the councils asking the Commission to continue active negotiations with the company. This was done and the company finally agreed to negotiate. After the matter was

thoroughly gone into it was found that a satisfactory agreement could not be made and the municipalities were so informed. Previous to this time a by-law permitting the company to increase fares had been defeated and the company stated they were unable to grant a wage increase demanded by their employees. The men went on strike and after some days without service, the Ontario Railway Board operated the road and granted the increases, the road being returned to the company about two weeks later.

Negotiations for the purchase of the road were re-opened shortly after this time and a satisfactory option was finally secured. By-laws and agreements were at once prepared, were sanctioned by the Government on October 16, 1919, and were submitted to the electors on December 6, 1919. Eight of the nine municipalities interested carried their by-laws and immediately agreed to assume the share of the township which had defeated the by-law. In 1920 the agreements were ratified by Act, and the Government, by order-in-council dated January 27, 1920, authorized the taking over of the road and guaranteed the Commission's bonds to the extent of \$2,100,000.

The transfer was made on April 1, 1920, and the Commission has since operated the road.

The amount passed upon by the electors, which was \$2,100,000, included, in addition to the purchase price, a small sum for badly needed immediate betterments only, as it was thought inadvisable to delay the taking over of the road until a complete study was made of the requirements of the system. During the winter of 1920 and 1921 a survey of the entire property was made to determine what further improvements could be recommended and a programme calling for an expenditure of \$900,000 was advised. This was approved by the municipalities and additional bonds to that amount were guaranteed by the Government on September 13, 1921. The betterments that were undertaken during the current year will be found under subdivision (3) and statistics of operation under subdivision (4).

Toronto Eastern Railway

Requisitions were received in 1919 from the municipalities along the uncompleted Toronto Eastern Railway from Toronto to Bowmanville, a distance of about 44 miles, asking that the Commission make a report on the acquisition and completion of this railway on behalf of the municipalities. The order-in-council authorizing this report was issued and a report was made recommending that the road be purchased and completed as it was found that it would be a self-sustaining utility. It was to cost completely equipped \$8,360,794. All the municipalities interested passed their by-laws and the agreements were validated by Act in 1920. Further proceedings were halted at this point pending the report of an investigating commission and the 1922 Radial Act cancelled all the agreements.

Hamilton, Guelph and Elmira Railway

After resolutions had been received from the municipalities in this district and on the authority of order-in-council, a report was made recommending that a new line be constructed from Hamilton to Galt and that purchase or running rights be obtained over the Grand Trunk Railway Branch Lines connecting Galt, Preston, Hespeler, Elmira, Kitchener and Waterloo, a total distance of about 80 miles. The construction and equipment costs were estimated to be

\$6,170,072. Thirteen of the fourteen municipalities voting carried their by-laws and three did not vote. Nothing further was done on this line pending the report of an investigating commission. The agreements authorized by the electors in the thirteen municipalities were cancelled by the 1922 Act.

Niagara Falls Street Railway

This report was made to the city of Niagara Falls in March, 1920, and indicated that it would be impossible to purchase this property and operate it on a self-sustaining basis, but it could be run at a profit if operated as a part of the Niagara Central System. This line is owned by the Canadian National Railways, forming a part of the Niagara, St. Catharines and Toronto Railway, and is subject to the option held on that line by the Commission. No further action has been taken since the report was presented.

Niagara, St. Catharines and Toronto Railway

Municipalities of the Niagara district forwarded resolutions from 1914 to 1916 asking for a report on a line from Welland to Niagara frontier. The Government by order-in-council of August 31, 1916, authorized the preparation of the report which was presented to the municipalities late in the same year. It recommended the construction of a line from Welland through Port Colborne to Bridgeburg. It was estimated that the revenue would meet all charges and was to cost \$2,208,716. Agreements were prepared and sanctioned by order-in-council dated September 28, 1916, and voting took place on January 1, 1917. All municipalities interested carried their by-laws. The agreements were ratified by Act in 1919. During the period following the voting, however, the Dominion Government, as stated above, became the owners of the N.S. & T. Ry. which paralleled the proposed line for a great portion of its length. The Commission therefore recommended that the new construction should be withheld pending conference with the Dominion Government as to the best procedure under the new conditions.

In 1920 resolutions were received from all municipalities on the N.S. & T. Ry. asking that a report be made on the acquisition of that line in their behalf. Resolutions were again forwarded by the municipal representatives in 1921. Previous estimates were then revised to date and a report prepared which recommended the taking over of this line as a paying proposition at a cost of \$4,663,830. This included, in addition to the purchase price, a sum for betterments and improvements. The report was approved by the municipalities and voted on in January, 1922. Nine of the fourteen municipalities voting carried their by-laws. The agreements so authorized have not been cancelled by the 1922 Act.

Chatham, Wallaceburg and Lake Erie Railway

Resolutions were received in 1920 from the municipalities served by this railway requesting a report as to whether it would be advisable that this railway be acquired on their behalf. After authority had been granted by order-in-council of April, 1921, information was collected and the report was prepared and considered by the Commission, but no recommendation has yet been made to the municipalities.

Guelph Radial Railway

In response to a resolution of the Guelph city council passed in September, 1919, the Commission made an investigation of the operation of this railway, and reports were submitted to the city on two propositions—one assuming the incorporation of the existing railway as a part of the Hamilton, Guelph and Elmira Railway, and a second on the basis of an independent railway. Both proposals were favorably voted upon by the electors. When action on the Hamilton, Guelph and Elmira Railway was held up in July, 1920, the city of Guelph requested the Commission and the provincial Government to permit the Commission to take over and operate the railway as a separate unit, as covered by the second above described proposition. The Government, however, ordered the project to be re-submitted to the electors before the transfer could be made. A new agreement was prepared providing for a sum of \$300,000, and was accepted by the electors at the annual elections, January, 1921. It was ratified by special Act in the same year, and the road was transferred to the Commission's management on May 1, 1921.

Toronto Suburban Railway

A resolution was received in 1921 from the city of Toronto requesting a report on this railway. A report was made recommending its purchase at a cost of \$2,778,000, which sum included an amount for betterments. By-laws and agreements were approved as authorized by the Toronto Suburban Railway Act, 1921, and were favorably voted on by the electors, January 1, 1922. The Dominion Government has given an option on the line on the basis that it will be a feeder to its trunk line railway. Details of the transfer are now being discussed.

REPORT ON WORK DONE DURING THE YEAR

Essex District Railways

Equipment

A large number of the two-man cars in the city service have been replaced by seventeen one-man, safety cars built according to the Commission's own plans and specifications. After considerable time and study had been given to a consideration as to the best type of car to be used, it was finally decided to provide double doors instead of the usual single-door design. The aisles were also made wider, and heavier motors, more comfortable seats and better heating were installed than had been used on similar cars in other cities. These cars are, of course, equipped with the usual automatic safety devices by which power is cut off, brakes applied and doors unlatched in the event of the operator removing his hand from the controller handle, through illness, negligence or for any other reason. The best possible fittings and equipment have been used and the cars represent the latest development of this type of rolling stock on the continent.

Service was given to certain districts of Windsor and Walkerville from which the traffic at present does not warrant the construction of rail lines, by four trolley buses operating on two routes. The buses also are the latest development of their kind and have several new features heretofore not used. The operation has been entirely successful up to the present time and has been remarked upon and inspected by electric railway operators from various sections of Canada and the United States.

Late in the year it was decided to purchase a motor express car and trailer to take care of the rapidly increasing freight and express traffic in this territory. Several offers are now receiving consideration and it is expected to have the new cars in service early in the new year.

For special heavy passenger service in Windsor and Walkerville, four double-truck safety cars have been ordered. These are now under construction and have been designed to facilitate rapid loading and unloading. They are to be equipped with all the latest automatic safety devices and may be operated either by one or by two men as the traffic demands. They will be delivered in 1923.

A new rotary substation at Petrimoux Corners on the Amherstburg line was put into operation during the year. The equipment is housed in a temporary galvanized iron structure as it was felt that the traffic developments in this section during the next few years will require further adjustment of the power supply. Previous to the opening of this station, all the power was supplied from the Salt Block station on Sandwich street, Windsor, and a booster was used for the Amherstburg line. Under these conditions about half of the energy supplied by the booster was dissipated in resistance on the trolley wire between Windsor and Amherstburg which resulted in most inefficient operation and low speeds. This condition has been rectified by the new station.

Track, Roadway and Buildings

During the year further rehabilitation and improvements were made to these facilities, as follows:—

The Ferry street loop, started last year, has been completed.

On Wyandotte street the old double track between Moy avenue and the easterly limits of the city of Windsor has been reconstructed using 56-lb. relay rails with creosoted ties on a 6-inch concrete base and plain concrete paving surface. On the remainder of the unreconstructed track on this street all joints have been lifted and the fish plates welded.

On London street repairs to the pavement were carried out.

Reconstruction on Ouellette avenue between Pine street and Sheppard avenue included installation of 85-lb. relay rail and tie plates taken from the Niagara development work. These were supported on creosoted ties and crushed stone ballast with a macadam paving surface.

From Sheppard avenue to Tecumseh road joints were repaired in a similar manner to those on Wyandotte street.

Steel combination light and trolley poles have been erected on Wyandotte street east to the city limits and on Ouellette avenue from Erie street north to Sandwich street. Some necessary changes were made in alignment on Wellington avenue when this street was paved and the track was resurfaced.

In Ford city the "Y" at the corner of Strabane avenue and Ottawa street was shifted and lowered so as to conform to the changes made last season in the Ottawa street tracks, and the Strabane avenue-Ottawa street curve relaid with 85-lb. rail on creosoted ties, the municipality having in both cases supplied an 8-inch concrete paving base. Between these points where Strabane avenue is being paved on either side of the track allowance, reconstruction has been carried out with 56-lb. relay rail, about 50 per cent. of the ties being renewed and the line resurfaced with rock ballast.

On London street, Sandwich, 500 feet of double track was replaced with 56-lb. rail and creosoted ties on crushed rock ballast and finished off with a tarvia pavement.

Private industrial spurs have been constructed on River street, and into the properties of V. Benoit, Windsor, V. Mayrand, and the Martinette Realities Company on the Amherstburg division, and an interchange with the Essex Terminal railway was installed near the southerly limit of Ojibway. Increased yard capacity at the car barns was effected by purchase of additional land and extensions of trackage.

Considerable improvement has been effected throughout various portions of the interurban lines. A 6-inch lift of ballast was given to one mile on the Tecumseh division and one and one-half miles on the Amherstburg division, and weeds were removed from the remainder throughout. Some 9,000 ties have been replaced and some other necessary betterments made to the track.

Seven new shelters were erected and the old ones repaired and repainted. An additional steel span was erected over the Canard river and repairs made to other bridge structures. The new sub-station at Petrimoux Corners has been completed and alterations to the feeder system made to conform thereto. Up-to-date telephones and telephone boxes have replaced obsolete equipment.

Generally, the whole of the Essex district with the exception of the tracks on Sandwich street and on the Walker road route has been placed in first-class operating condition.

Operation

The Commission is pleased to report that the rehabilitation of the property to place it in fair operating condition is now completed and that the most pressing of the improvements required for reasonable operation have also been placed in service. The district served is growing so rapidly that more cars must be secured immediately and additional double track with some extensions must also be provided if the traffic offered is to be satisfactorily handled. A programme of suggested improvements is now being prepared and will be submitted to the municipalities for approval early in the new year.

The financial statements showing the balance sheet as of October 31, 1922, and the operating figures for the current fiscal year, will be found in the next subdivision of this section of the Commission's report.

The balance sheet shown, refers to the Sandwich, Windsor and Amherstburg Railway as the books must be kept in the name of that Company until all the outstanding bonds issued by the old Company are retired in September, 1927. The Commission's bonds for an equal amount are meanwhile in the hands of a Trust Company and are only delivered to the owners of the former Company as the old bonds are retired by them.

The investment of the municipalities in the railway is now made up as follows:

(1) Purchase price and allowance for imperative repairs at date of acquisition.....	\$2,100,000
(2) Rehabilitation and improvements as authorized by municipalities in 1921.....	900,000
	<hr/>
	\$3,000,000

Some \$2,000,000 of the above capital is in the form of $4\frac{1}{2}$ per cent, 40-year bonds used to purchase the property. This amount is equivalent to approximately \$1,500,000 on the basis of 6 per cent bonds so that the investment to date in ready money is about \$2,500,000.

It has been asserted that the Commission paid about \$400,000 more than the depreciated value of the property at the time purchased. Those making such a statement have forgotten to take into consideration the fact that the purchase bonds were based on $4\frac{1}{2}$ per cent money whose face value at 6 per cent was only some \$1,500,000. The Commission's depreciated valuation was approximately \$1,650,000, i.e. slightly more than the purchase price. The Commission estimates that the actual physical value of the property is at least equal to or greater than the value of the outstanding bonds and that the net return from operation in the future will be sufficient to meet all operating and capital charges.

A statement that has been made that the line is over capitalized, does not bear investigating. In 1919 the capitalization was approximately \$2,000,000 and the gross earnings of the line in that year were \$377,000, while in 1922 the capitalization stood at approximately \$3,000,000 and the gross revenue was over \$570,000 so that the ratio of capital investment, as compared with the earning capacity, is considerably in favour of the 1922 condition.

The operating statement for the current year is technically correct, but it cannot be used as a guide for future years. The revenue was seriously affected by the more or less disorganization of service that occurred while the property was being rehabilitated and improved and by the inability to maintain a regular service with some of the older cars. The repairs to track and equipment have been practically completed and the most run-down of the cars replaced by those of a more modern and efficient type, thus it is reasonable to anticipate an increase in revenue for the coming year.

The operating expenses were adversely affected by the same conditions as the revenue only to a greater degree. It is impossible to record the difficulties that faced the operating staff in maintaining even the semblance of regular service with the dilapidated condition of track and equipment but it is hoped these difficult conditions are past and that the service may continuously be improved.

At this stage it may not be out of place to add a few words as to the stand the Commission has taken regarding a reserve fund for depreciation. The Accounting department, without a specific ruling from the Commission, commenced setting aside monthly amounts for depreciation from the date of purchase. The Commission has recommended that depreciation charges should be set aside for the utilities which it operates but when the returns from operation after completion of the rehabilitation programme were available and indicated that this work had seriously affected the net revenue, it was decided that it would be equitable to defer the depreciation charges until the property was placed in satisfactory working condition. It is now the intention to charge depreciation each month dating from November 1, 1922.

Before leaving this subject it might be well to point out that the Hydro-Electric Railway Act under which the Essex District Railways are operated does not call for the Commission to set aside a reserve fund for depreciation. Clause I (I) of the agreement between the municipalities and the Commission also makes it clear that depreciation should only be provided out of any surplus remaining after all other charges have been met. It is apparent that it is equitable to postpone the depreciation charges during the reconstruction period that is estimated to have been completed on November 1, 1922.

The operating statement for the year, shown in the next subdivision of this report, indicates a net deficit of \$4,385. This deficit was largely caused by the increase in interest charges to cover the new capital used for repairs and

improvements from which full returns were not secured until all had been placed in service and properly co-ordinated towards the end of the year. It should be noted that the deficit of \$4,385 is, after all, a relatively insignificant amount, —a fact which will be clear when it is realized that an increase in revenue of only one per cent or a decrease in expenses of the same amount would have entirely wiped out this deficit.

It is believed that much useful information can be obtained from a study of the annual statistics of operation over the past ten years and a graph of the more important items is, therefore, presented on an accompanying page.

The available traffic in any district is naturally a function of the population so it is encouraging to note that, during the decade covered by the graph, the population served has increased from 30,000 to 70,000—that is, it has more than doubled. This means that the inherent possibilities of the railway are very good indeed, especially when statistics of other corresponding districts indicate that the number of times per year the average resident uses an electric railway increases very rapidly as the population grows. This is but natural as, once a city has reached a certain size, the new population must settle in the outskirts at some distance from the business section and consequently must use the street cars to a greater extent than older population settled closer downtown. There is also a tendency for manufacturing plants to locate on the outskirts to secure proper railway sidings, lower taxes, etc., all of which increases the average riding per head of population.

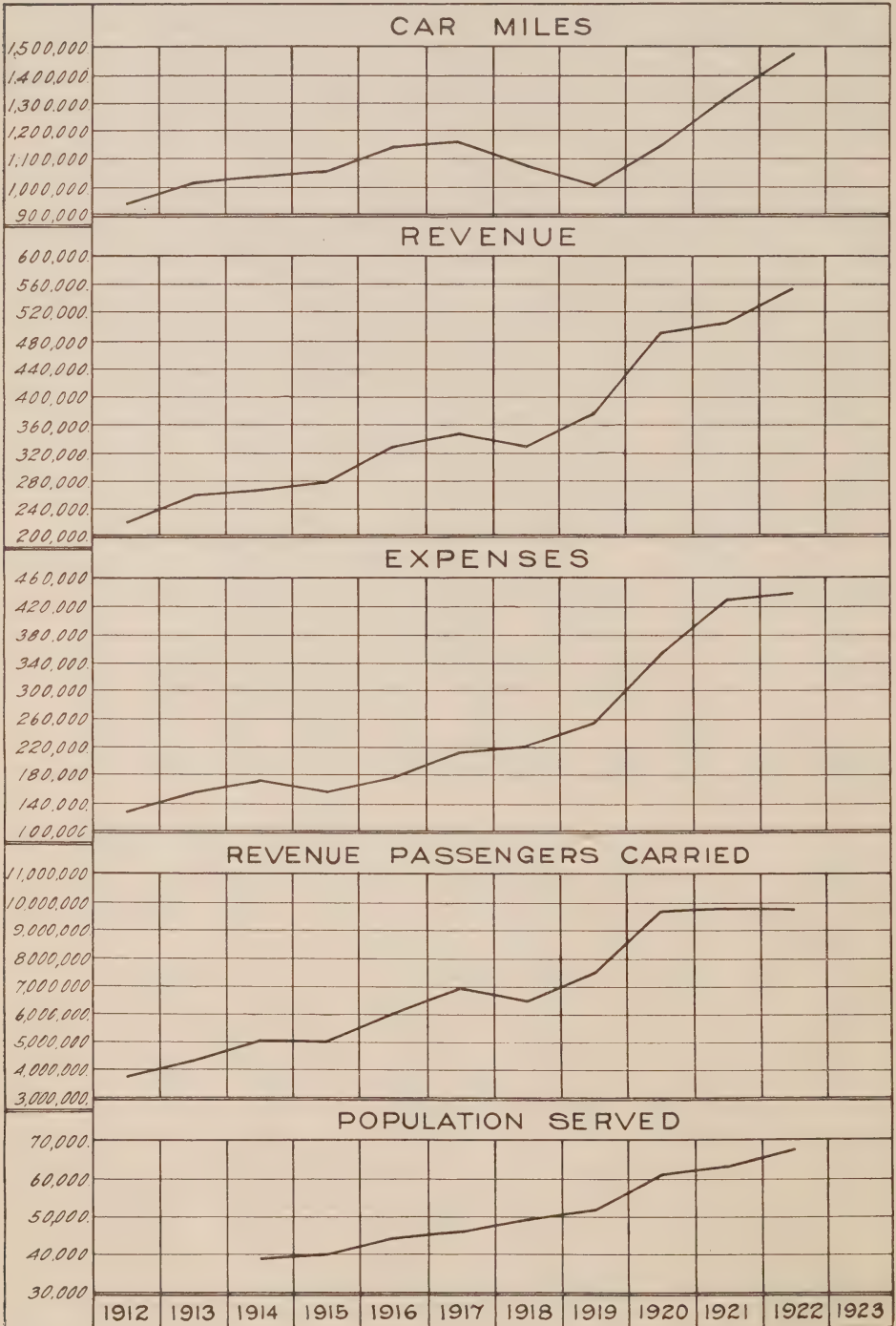
The lack of adequate facilities to take care of the increased traffic is clearly shown by the curve of revenue passengers which, as pointed out, should have shown an appreciable improvement in riding habit when the population doubled.

The comparative returns for November, 1921, and 1922, show this to be the case as the passengers increased almost 10 per cent, due entirely to the new cars, track, other facilities and the more reliable service rendered in November, 1922, over November, 1921. There is every reason to anticipate that the coming year will show a considerable increase both in the riding habit per inhabitant and in the total revenue passengers handled, as the facilities are now much improved.

The same remarks are equally applicable to the curve of operating revenue. There should also be an improvement in the additional revenue secured from the non-resident or casual rider who is now charged six cents for his fare on local lines. This change was explained to representatives of the municipalities at a meeting in Windsor towards the close of the year.

It will be noted from the graph that the annual car miles operated by the old company remained practically constant during the last six years under its control. The number of passengers carried increased about 75 per cent during the same period. In other words the service (i.e. the car miles run per passenger) was very much reduced. This fault, as far as possible, has been corrected with the equipment that is available and still further improvement will be made if the municipalities authorize the purchase of the additional cars now being recommended by the Commission. The graph indicates that there was no increase in car miles given by the railway from 1913 to 1919 and that since then, under the Commission management, there has been an increase of 45 per cent. The lack of proper service in 1918 and 1919 resulted in there being no gain in passengers carried during that period and is in remarkable contrast with the period from 1919 to 1922 where an increase in service of 40 per cent resulted in a corresponding increase in passengers carried.

ESSEX DISTRICT RAILWAYS OPERATING STATISTICS



It should be noted, first, that the traffic handled and revenue secured have shown a gratifying increase in rate of growth as compared with the preceding years and, second, that the operating expenses per car mile have been kept within 10 per cent of the 1919 figure although employees' wages, cost of power and other items of expense have increased at a greater rate. These results could not have been secured if the improvement programme had not been carried out.

The operating expenses per car mile for the period immediately preceding the acquisition of the railway as compared with the corresponding figure for recent periods with the rehabilitation programme finished, possibly gives the best justification for the new expenditure incurred. It is well known that the company curtailed every possible expense for some months prior to turning over the railway and, therefore, the expense of 27 cents per car mile for such period, with practically no maintenance being done on either track or cars, was very much less than it should have been. Since that date wages of employees have been increased nearly 40 per cent, the cost of power has increased about the same percentage and practically every other charge also, including an amount to make up for the deferred maintenance, and yet the corresponding figure for the fiscal year 1922 is 29.5 cents per car mile. Many of the improvements were not installed until late in the summer, hence it is reasonable to anticipate a lower operating cost for the current year. The operating expenses per car mile for the month of November, 1922, were 25.4 cents or considerably below the corresponding figure for the last year under the old company control, when wages, cost of power, etc., were very much less and when no attempt was made to maintain the property in working condition.

It has been asserted that the Commission did not have the right to take over the existing railway on behalf of the municipalities until the 1920 Act was passed, i.e. some two months after the purchase deal was put through. This statement is incorrect as the amendment to The Hydro-Electric Railway Act passed in 1916 provided—

“The agreement may include.....the purchase
.....or running rights over any steam railway,
electric railway, etc., as part of the railway to be constructed by
the Commission.”

Those who have made the above statements that the Commission was not empowered to take over the railway, have evidently been misled by section three of the 1920 Act passed about three months after the railway was acquired. This section repealing the corresponding section of the 1916 amendment was passed on the recommendation of legal counsel to make the clause more clear, but counsel, at the same time, maintained that the language of the original clause left no doubt respecting the right of the Commission to acquire a railway to form a part or a whole of any proposed line. It should further be pointed out that the Government itself recognized the Commission's authority to purchase the railways by passing orders-in-council authorizing the purchase agreement and the guaranteeing of the bonds, etc., and, still further, that the bonds were marketed and duly approved by the counsel of purchasers.

Guelph District Railways

Equipment

Previous to the acquisition of this road by the Commission, service was given with heavy, double-truck, two-man cars of a type suitable for heavy service in large cities. When it is pointed out that these cars, throughout the

greater part of the day, carried an average of only four or five passengers, it can readily be seen that the heavy expenditure on maintenance of both track and equipment, power and crew wages, necessitated by their use was not warranted by the traffic. They were, therefore, replaced by eight one-man, safety cars similar to those supplied for use on the Essex District Railways mentioned above. They have proved successful in operation and have helped, materially, to reduce operating expenses.

Track, Roadway and Buildings

The programme of reconstruction initiated shortly after the Commission assumed the management of the Guelph radial railway has been continued throughout the year.

The single track line along Woolwich, Wyndham, Carden and Wilson streets was torn up and has been replaced with 80-lb. rail, having welded joints and resting on steel ties embedded in concrete; 80-lb. material was also placed on the curve at Surrey and Neeve streets in conjunction with 140-lb. special work.

Reconstruction with 85-lb. steel was carried out on Brock road and Moore avenue, on Waterloo street from Edinburgh street to the end of the line and on Elora road between Suffolk and Clark streets, this latter stretch being paved with concrete. 85-lb. steel was also used in a new interchange track with the C.P.R. on York road.

80-lb. relay rail was used in reconstructing the track in front of the G.T.R. depot, on Elora road from Kitchener road to the end of the line, in the construction of new passing sidings on Gordon street and on Ontario street and on the single track gap on Surrey street between Gordon and Huskisson streets. In connection with the two last mentioned installations 140-lb. special work was employed.

A new diamond has been placed at the C.P.R. crossing on York road and the track at various places throughout the system rebalasted and paved.

In addition to the above a considerable amount of joint welding, bonding, renewal of poles and wiring has been completed and the distribution system, except at a few points which are under construction, put in first-class condition.

Operation

The rehabilitation of the Guelph properties which has been under way since they were acquired by the Commission, is now well advanced. There are still certain details requiring attention but these will likely be carried out during the ensuing year.

It is well known that when the Commission took over this property the roadbed and equipment were in such a condition that it was impossible to operate efficiently. In other words, conditions that have faced the Commission during the past year or two were practically the same as those which were met with in Windsor and which have already been outlined in the report on the operation of the Essex District railways.

Prior to the acquisition of the property by the Hydro-Electric Power Commission, the line for some years had not been meeting its operating expenses, and hence during the rehabilitation period the benefits from the suggested improvements would naturally not be fully apparent. The work of rehabilitation is now being completed and the present operating statistics show conclusively that the rebuilding of the line was well advised because it is now possible to give a very much improved service and this condition is reflected in the earn-

ings which also show improvement with a considerable reduction in operating expenses notwithstanding the increased car mileage.

In connection with the financing of the undertaking the city of Guelph issued the necessary debentures as collateral guarantee only and the line is being purchased not from these debentures but, as is shown by the operating statement, out of receipts from revenue. It has been said that the actual agreement under which the road is now being operated was different from that originally presented to the electors in 1919, and that these differences were not explained. This is incorrect as the matter was thoroughly discussed at many public meetings when the final agreement was under consideration. The Guelph daily papers for December, 1920, set out the proposition in great detail. They contained letters from the city solicitor as well as editorials commenting upon the two agreements.

An attempt is being made to show that the Commission's estimates for rehabilitation and improvements have been largely exceeded. The expenditure to date is approximately \$265,000 or some 35 per cent over the estimate submitted in November, 1919. Those making such incorrect statements must lack even a superficial knowledge of what was included in the estimates as compared with the work actually carried out. The 1919 report explicitly stated that the estimate of \$197,000 included the cost of putting the railway "in fair operating condition only." The rehabilitation and betterments carried out have gone far beyond the 1919 estimate but only after thorough discussions with the city. An additional \$150,000 over that provided to take care of the \$197,000 estimate, was authorized by motion of the city council on June 19, 1922. The rehabilitation programme has been carried out under various estimates that have been submitted by the Commission and approved by the city council of Guelph.

There may possibly be some misunderstanding as to the present rates of fare, because some reference has been made to a statement of the Chairman of the Commission in December, 1919—that the estimate of that date contemplated a continuation of a straight 5-cent rate. Since that time the Commission has recommended a considerable number of improvements not contemplated in 1919, and there has also been a large increase in the cost of labour and material. These changes in programme were duly ratified by the city council and the improved financial statement made possible by these betterments justifies the Commission's recommendations. The average citizen of Guelph can still secure the old 5-cent fare by purchasing tickets while the casual rider or visitor is certainly not injured in being required to pay the 6-cent cash fare recommended by the Commission and assented to by the city council. The citizens in general have made up the deficiency in revenue that has occurred during the past years in their tax bills and it would seem perfectly equitable to ask the visiting rider to pay slightly more than the average citizen as such a rider does not assume any responsibility beyond his straight car fare.

The number of passengers handled and the revenue from operation has shown a favourable increase, and the operating expenses, even with an increase in service, are showing a substantial reduction now that the improvement programme is completed. It is quite true that depreciation and sinking fund must sooner or later be provided for, but it is unreasonable to expect a street railway system operating in a small city to earn sufficient during a rehabilitation period to take care of such additional charges as well as the operating and capital expenses. Even large city properties are frequently unable to make such provisions. The Government evidently considers it perfectly equitable to defer

sinking fund for a period of ten years to permit any railway operated under the Hydro-Electric Railway Act to become well established and developed. The period for omission of sinking fund for the power undertaking is only five years but the power system is, relatively, a less expensive undertaking and one that does not require as long a period in which to become established. There are few electric railways that make provision out of revenue for retiring the total capital invested and, therefore, from all sides it would appear equitable to defer depreciation during the rehabilitation period, and sinking fund for a period of ten years.

It may be suggested that it would have been more advantageous for Guelph to elect the members of the Hydro Power Commission as a Board of Directors for the Guelph street railway, thus permitting Guelph to change the control from time to time as it might desire. This would not give Guelph the benefits of the Commission's engineering and operating staff, the value of which has been clearly shown in the reduction in operating expenses from 37.4 cents per car-mile to approximately 23 cents per car-mile during the past two years. The Commission could hardly be expected to keep a railway engineering and operating staff available from time to time for service for Guelph.

The present agreement under which the railway is operated by the Commission on behalf of the city, was authorized by the electors after the matter had been thoroughly discussed in one form or another for a period of a year. The agreement is modelled on the standard form used for Hydro-Electric Railways but contains some special clauses to meet certain local conditions and the requirements that were outlined by the Government. The Premier went on record to the Mayor of the city of Guelph, prior to the date of voting, that the Government would sanction and approve the agreement if it were accepted by the electors. This was taken care of by the Guelph Railway Act of 1922. A clause was inserted in the agreement that it would not be binding until such special Act had been passed.

There appears to be an attempt to show that the city is receiving no financial benefit from placing its railway for a period of fifty years in the hands of the Commission, whose personnel may change from time to time. In the first place the city is even to-day receiving a considerable financial benefit inasmuch as the receipts are now sufficient to cover all operating expenses and interest on the entire capital. Before the railway was acquired, receipts were not sufficient to meet the purely operating expenses. In the second place the tracks, cars and property have been placed in first-class condition and a much more frequent and reliable service is being given. This may not be a direct financial benefit to the city but must at least be a very welcome improvement and indirectly is doubtless a financial benefit.

Lastly, the decision to transfer the railway to the management of the Commission as trustee for the municipality of Guelph was only authorized after the agreement had been carefully scrutinized. Such matters as the continuation of the present Hydro Commissioners in office, the 50-year contract and other important features, were fully discussed prior to voting so that the mandate of the people—of 1,152 votes for the agreement and 472 against—is conclusive evidence that they were in favour of the proposed change in management.

It will be noted from the operating statement given in the next subdivision of this report that the railway has paid taxes as it did prior to the date of transfer to the Commission management.

ESSEX DISTRICT RAILWAYS

Operating Statistics

Route-miles:

City trolley.....	14.56	
City trollibus.....	4.21	
Amherstburg interurban.....	14.31	
Tecumseh interurban.....	6.42	
Total route-miles.....		39.32

Passenger and freight car-miles operated.....	1,482,516	
Passenger and freight car-hours operated.....	176,847	
Average number of employees.....	153	
Accidents.....	316	
Passengers carried.....	11,015,257	
Percentage of transfer passengers to revenue passengers.....	13.5	
Passenger cars operated.....	57	
Passengers carried per route-mile.....	280,143	
Passengers carried per car-mile.....	7.6	
Passengers carried per car-hour.....	63.5	
Average mileage per car operated.....	25,385	
Average passenger per car operated.....	193,250	
Average riding (revenue) habit.....	147.9	
Freight tonnage carried.....	6,726	

GUELPH DISTRICT RAILWAYS

Operating Statistics

Route-miles.....		8.49
Passenger and freight car-miles operated.....	215,796	
Passenger and freight car-hours operated.....	30,735	
Average number of employees.....	34	
Accidents.....	53	
Passengers carried.....	1,545,623	
Percentage of transfer passengers to revenue passengers.....	14.2	
Passenger cars operated.....	13	
Passengers carried per route-mile.....	157,606	
Passengers carried per car-mile.....	7.2	
Passengers carried per car-hour.....	52.3	
Average mileage per car operated.....	16,393	
Average passengers per car operated.....	118,894	
Average riding (revenue) habit.....	74.2	

**SANDWICH, WINDSOR AND AMHERSTBURG RAILWAY AND
STATEMENT OF ASSETS AND**

ASSETS

Road and Equipment Rights, Franchises and Goodwill of the Sandwich, Windsor and Amherstburg Railway.....	\$2,299,700.77	
Of the Windsor & Tecumseh Electric Railway Company.....	367,561.55	
Construction Material on hand.....	55,051.19	
		\$2,722,313.51
Investments:		
City of Windsor 4½ per cent. Bonds due 1960.....	\$190,000.00	
Interest accrued thereon.....	712.50	
		190,712.50
Materials and Spare Equipment.....	\$48,842.35	
Stationery, Tickets and other Supplies.....	3,754.31	
Accounts Receivable.....	6,329.02	
Cash in Bank.....	10,444.97	
		69,370.65
Detroit United Railway—In respect of Bond Interest accrued.....		10,762.50
Valuation and other expenses re purchase of Plant Assets and Capital Stock of these Companies by the Hydro-Electric Power Commission of Ontario.....	\$17,795.45	
Less three-tenths written off.....	5,338.64	
		12,456.81
Insurance unexpired.....		5,177.09
		\$3,010,793.06

**SANDWICH, WINDSOR AND AMHERSTBURG RAILWAY AND
COMBINED OPERATING ACCOUNT FOR THE**

Maintenance—Way and Structures.....	\$ 36,351.34	
Maintenance—Equipment.....	65,032.02	
Power.....	49,070.99	
Transportation Expenses.....	215,567.50	
General and Miscellaneous Expenses.....	69,659.45	
Taxes.....	3,471.94	
		\$439,153.24
Interest on borrowings.....		38,819.70
Interest on bonds, \$2,039,000.00* issued by the Hydro-Electric Power Commission of Ontario to cover the purchase price of the Plant assets and Capital Stock of the Railway Company.....		91,755.00
		\$569,727.94

* \$689,000.00 of these bonds are held by the National Trust Company as security for retirement at maturity, by the Detroit United Railways, of the outstanding bonds of the Railway companies.

Note: Interest on the outstanding bonds of the Railway companies has been paid by the Detroit United Railways under agreement dated 14th January, 1920.

THE WINDSOR AND TECUMSEH ELECTRIC RAILWAY COMPANY

LIABILITIES, 31st OCTOBER, 1922

LIABILITIES

Capital Stock:

Sandwich, Windsor & Amherstburg Railway, 2,970 shares of par value of \$100.00 each.....	\$297,000.00	
Windsor & Tecumseh Electric Railway, 1,000 shares of par value of \$100.00 each.....	100,000.00	
General Reserves.....	753,839.58	
		<u>\$1,150,839.58</u>

Bonded Debt:

Sandwich, Windsor & Amherstburg Railway First Mortgage Gold Bonds due 1st December, 1922.....	\$490,000.00	
Windsor & Tecumseh Electric Railway Co. First Mortgage 5 per cent. Gold Bonds due 2nd September, 1927.....	189,000.00	
Interest accrued to 31st October, 1922.....	10,762.50	
		<u>689,762.50</u>

Hydro Electric Power Commission of Ontario:

Cash Advance.....	\$1,100,000.00	
Less Current Account..*	40,997.95	
		<u>1,059,002.05</u>

Accounts payable and accrued charges.....	22,646.47	
Deposits to cover cost of customers sidings.....	3,916.25	
Provision for unredeemed tickets.....	2,200.00	
		<u>28,762.72</u>
Premium on Hydro-Electric Power Commission 6 per cent. Bonds.....		73,166.67
Surplus.....		9,259.54
		<u>\$3,010,793.06</u>

THE WINDSOR AND TECUMSEH ELECTRIC RAILWAY COMPANY

YEAR ENDED, 31st OCTOBER, 1922

Operating Revenue.....	\$556,792.68
Interest from Bonds of the City of Windsor.....	8,550.00
	<u>\$565,342.68</u>
Total Revenue.....	\$565,342.68
Net Deficit for the year.....	4,385.26

\$569,727.94

**GUELPH RADIAL
STATEMENT OF ASSETS AND**

ASSETS	
Road and Equipment.....	\$395,377.65
Construction Material.....	6,030.12
Stores and Spare Parts.....	\$4,802.21
Stationery, Tickets and other Supplies.....	220.00
Accounts Receivable.....	2,714.57
Insurance unexpired.....	834.10
Cash in Bank.....	863.55
	9,434.43
Valuation and other expenses re purchase of plant assets by the Hydro- Electric Power Commission of Ontario.....	2,563.00
Less—one-fifth written off.....	512.60
	2,050.40
Due by the City of Guelph.....	15,062.78
	\$427,955.38

**GUELPH RADIAL
OPERATING ACCOUNT FOR**

Maintenance—Way and Structures.....	\$ 6,729.40
Maintenance—Equipment.....	16,261.27
Power.....	10,808.54
Transportation Expense.....	28,353.94
General and Miscellaneous Expenses.....	13,569.36
Taxes.....	3,176.82
	\$78,899.33
Interest.....	6,334.69
Payment to City of Guelph, of Instalment due 1st May, 1922, and pro- vision for payment due 1st November, 1922:	
Interest for year.....	\$6,581.68
On account of Principal.....	5,118.32
	11,700.00
	\$96,934.02

RAILWAY

LIABILITIES, 31st OCTOBER, 1922

LIABILITIES

Hydro-Electric Power Commission of Ontario:

In respect of the purchase price of the railway from the City of Guelph under agreement dated 8th December, 1920	\$150,000.00	
Less—Instalments paid on account of principal		
1st November, 1921.....	\$2,475.00	
1st May, 1922.....	2,530.69	
		5,005.69
		<u>\$144,994.31</u>
In respect of the 6 per cent. 1931 bonds, issued by the Commission for the purposes of the railway.....		150,000.00
Interest accrued thereon.....		4,489.32
In respect of demand loan from the Bank of Montreal, obtained by the Commission for the purposes of the railway secured by \$150,000.00 Guelph Radial 6% 1942 Bonds.....		115,000.00
		<u>\$414,483.63</u>
Less—a portion of the proceeds of loan, held, for the time being, by the Commission.....		\$8,021.57
		<u>406,462.06</u>
Accounts payable, and accrued charges.....	\$15,211.88	
Provision for unredeemed tickets.....	620.00	
Deposits to cover cost of Sidings to be constructed for customers....	655.75	
		<u>16,487.63</u>
General Reserve.....		5,005.69
		<u>\$427,955.38</u>

RAILWAY

YEAR ENDED 31st OCTOBER, 1922

Operating Revenue.....	\$74,022.51
Net deficit for year, payable by the city of Guelph.....	22,911.51

\$96,934.02

SECTION VIII

GENERAL ACTIVITIES

ELECTRICAL INSPECTION

Inasmuch as all electrical installation work in the province of Ontario has to be carried out in accordance with definite rules, with which wiremen are now well acquainted, inspection has become so well standardized that it is unnecessary here to refer in detail to this aspect of the work of the Department of Electrical Inspection.

The work of the Electrical Inspection department grows with the growth of the Commission's operations. Every new municipality connected, even every new customer, adds something to the department's responsibilities. The increase in the amount of work handled by the department is well illustrated by the following table:

Year	Number of Permits Issued	Number of Inspections
1916.....		100,787
1917.....		113,863
1918.....		110,445
1919.....		135,804
1920.....	87,399	160,990
1921.....	84,352	160,873
1922.....	91,932	182,522

Although the work of the Inspection department grows in proportion to the steady increase in the number of electrical installations in the Province, it is satisfactory to record that the extra work in 1922, as compared with 1921, was handled by practically the same sized staff, there being only two new inspectors. One new inspector was appointed at Sioux Lookout, north of Fort William, this appointment being necessary on account of the special activity in house building which took place during the year in this territory. The other new inspector was appointed to meet the needs of a new district in the Timmins region, in Northern Ontario. This inspector is in charge of the new district of Cochrane, which comprises Cochrane, Iroquois Falls, Smooth Rock Falls and Kapuskasing.

Defective Installations

The amount of money spent each year by consumers, usually without any protest, in putting defective installations into good condition following recommendations made by the department, indicates that the public as a whole recognizes that these recommendations are made entirely for the public good.

The sum spent in 1922 throughout the Province on work of this kind was nearly \$340,000, of which Toronto's share was \$110,000.

Electric Cooking

Another item worthy of notice is the large number of electric cooking ranges used in various Hydro municipalities, for which, in very many instances, special wiring, involving special inspection, has been required. In twenty of the larger municipalities in the Province there are about 18,000 electric ranges in use, most of which have been installed during the last few years.

Fires and Accidents

The number of accidents and fires occurring annually in Ontario due to the use of electricity by the general public, is altogether insignificant. This will be better appreciated when it is remembered that there are more than 300,000 consumers of electrical energy in the Province. Considering the very rapid rate of increase in the number of consumers throughout the whole period since the Electrical Inspection department was first created ten years ago, the fact that so few accidents occur may be attributed in large measure to the vigilance of the department and to the loyal co-operation therewith of practically all wiring contractors and wiremen, who realize that their best interests are served by having all installation work kept up to a reasonable standard of safety.

Inspection in Rural Districts

The extension of the Commission's lines into rural districts is also adding considerably to the work of the Inspection department, for not only is the number of inspections to be made in such districts becoming quite appreciable—approximately 355 miles of rural lines were constructed, and about 1,500 rural consumers were connected in 1922—but the fact that these consumers are far apart as compared with those in cities, makes the work relatively more arduous. It may be mentioned here, also, that this same fact makes inspection in rural districts considerably more expensive than in cities and towns where the population is more dense.

It has been pointed out in earlier annual reports that the Inspection department is at all times in close touch with the Commission's Testing and Approval Laboratory; this is essential, for it is plain that no installation work could be considered good or safe, however well the work might be carried out, if the apparatus, devices, material, etc., made use of, were of poor design or quality.

Committee on Rules and Regulations

Apart from the actual work of inspection, the Inspection department has, during the year, been closely associated with the revision of the Commission's "Rules and Regulations for Inside Electrical Installations," which are in the hands of a sub-committee of the Rules and Regulations Committee. This latter body is composed of various members of the Commission's staff drawn from the Inspection and Engineering departments, and of representatives of those outside bodies specially interested in such work.

The outside bodies thus represented are:

- The American Institute of Electrical Engineers. . (Toronto Branch)
- The Toronto Electrical Contractors' Association.
- The Canadian Fire Underwriters' Association.
- The Electrical Jobbers' Association.

The Electrical Supply Manufacturers.
The Electrical Manufacturers.
The Fire Marshal of Ontario.
The Ontario Safety League.
The Ontario Association of Architects.
The Ontario Association of Electrical Contractors and Dealers.
The Association of Municipal Electrical Utilities of Ontario.

The Chief Electrical Inspector is chairman of both the main and the sub-committees.

The Commission's "Rules and Regulations," as closely as seems desirable for Ontario conditions, follows the National Electrical Code of the National Board of Fire Underwriters in the United States, and, since the latter is at present under revision and will be published early next summer, it has been thought well to delay putting into force any revised rules until advance copies of the proposed changes in the National Electrical Code become available. These, it is expected, will be ready some time in January, 1923. The National Code is well-known all over this continent and the Commission's rules follow it as closely as possible. In addition, the Commission's Code embodies many provisos regarding safety to life with which the National Board of Fire Underwriters has not in the past concerned itself.

Radio Equipment

The number of persons who have installed "radio" equipment within the past year has been phenomenal, and the Inspection department has noted with regret that this has given rise to quite a number of accidents. In the United States the same conditions are to be found on a larger scale, and the National Board of Fire Underwriters has already issued a set of tentative rules designed both to minimize fire risk and accidents by warning unsuspecting persons of possible dangers, and to constitute a standard for safe construction and installation. It was felt that some such action was needed in Ontario, and at the instigation of the Inspection department the matter of formulating a set of rules governing "radio" installations is being given careful consideration.

Electrical Homes

"Electrical Homes," that is, houses specially wired and furnished with convenience outlets in practically every room, have been on exhibition within the past year or two in several Ontario municipalities. These houses are of course equipped by various branches of the electrical industry, in co-operation with the builders, for advertising purposes, but they are of advantage to the Electrical Inspection department because the public is educated to know what constitutes a first-class installation comprising the best materials and workmanship and the safest types of household electrical devices.

Moreover, the provision of an ample number of properly installed outlets reduces the risk attached to the indiscriminate use of long extension cords and amateur wiring.

One other matter of interest which may be mentioned is the excellent influence which the equipping of these so-called "Electrical Homes" has had on builders, who, on the whole, have been quick to realize the convenience and consequent selling advantages of first-class electrical installation work and the provision of numerous outlets to which various household electrical devices may readily be connected.

LABORATORIES

In this department are centralized the functions of testing, research, and of inspection of materials, and the facilities and staff are at the service of the municipalities, in connection with all problems coming within the scope of these functions.

A considerable amount of testing has been done for the municipalities but it is believed that much greater use should be made of the Laboratories by the municipalities, and an effort is being made by means of articles in the "Bulletin" to describe the facilities for testing and research which are offered by the Commission through the Laboratories.

Despite a decrease in certain portions of the laboratory work, the total volume of testing has maintained the level of previous years. The growth of the Commission's activities has given rise to an increase in the testing and research work connected with problems of maintenance and operation, and this has offset the decrease due to the completion of several large construction jobs. The variety of work has increased during the year and the added knowledge and experience gained by the staff in attacking new and unusual problems is of increasing value in the routine work of the department.

The volume of testing for parties outside the Commission (exclusive of approval testing) has not been great during the year, but it has been varied in character and has included electrical, chemical and physical problems.

The reports of the various sections of the Laboratories, seven in number, given below indicate by examples the activities of the department during the year. Several tests of particular interest or importance, and certain items of equipment are illustrated in the accompanying cuts.

High-Tension and Electrical Testing Laboratory

The general routine activities of the High-Tension and Electrical Testing Laboratory have followed the lines indicated in previous reports, and special attention has been given to several problems which have become of great economic importance.

As one of these last, the construction and installation of a reliable system of communication using radio frequency equipment with the main power transmission line as a guide has been carried on with assured success. Considerable experimental work has been necessary to adapt the equipment to local conditions and to increase the efficiency of communication. This system promises greater reliability during periods of trouble as well as freedom from inductive disturbances at audio-frequencies which are always present when communication lines run in close proximity and parallel to power lines.

Again, the general problem of inductive interference of power circuits with communication lines which is increasing with the expansion of the distribution systems and which has given rise to much litigation in various parts of the United States, has been dealt with by the Laboratory in a sound engineering manner.

Special attention is required to be given to generating apparatus, transformers, etc., in order to eliminate all sources of such distortions in wave form as cause interference in neighbouring communication circuits, but which are little or no trouble to the power circuit itself. Elaborate and severe tests have been planned and carried out in close co-operation with one well-known communication

company, thus obtaining definite knowledge as to what is or is not possible in correcting troubles of this nature. In this connection it is worthy of note that the voltage wave forms of the new Queenston generators are nearly ideal.

Investigations have been made on equipment for specific purposes, some theoretical only, others supplemented by practical work when advisable. The experience obtained by the staff in carrying out such investigations is reflected in the facility with which problems of widely differing characteristics are attacked and solved.

Special problems of more or less general interest have included the following:

Tests and study of heat insulations for electrically-heated water tanks and the determination of comparative efficiencies of various materials; electrical characteristics of paints, varnishes, tapes, compounds, etc., and proposed systems of high-voltage direct-current transformation. Supplementary methods of heating have been given some attention with a view to ameliorating conditions anticipated on account of fuel scarcity. Some advisory inspection and testing of a special character has been undertaken on engineering materials and assembled parts for electrical purposes. Systems of refrigeration, electric and electrically driven, have also been investigated and more work remains to be done along this line. Special high-voltage testing, for which the facilities of this Laboratory are particularly well adapted, has been carried out.

The service which a laboratory such as this may render is increased in value by using it as a clearing house for up-to-date scientific knowledge with special reference to its application to engineering practice. The field of applied electrical engineering is very wide and progress therein is made more certain by co-ordination of effort through such an agency as this laboratory.

Approval Laboratory

The improvement in business conditions in the electrical manufacturing trade has been reflected in the increased number of applications for approval of devices received during the year, nearly 200 new or improved devices or appliances having been submitted. During the same period 139 approval reports were completed and 153 cards issued summarizing these reports. In addition, a large number of applications was received from manufacturers using the Underwriters' Laboratories "re-examination" or "label" service, and 103 cards covering their products were added to the approval record.

Among the new lines added during the year have been bread wrapping and sealing machines, water-pumping outfits, portable drills and grinders, motor-operated fans and blowers, interlocking switches for elevator doors and porcelain insulating devices. Additions have been made by many manufacturers to their lines of air and water heaters, ranges, snap switches and receptacles, etc.

Following up the issue by the Rules and Regulations Committee of a tentative set of rules for radio installations, applications were received for the approval of a number of so-called socket antennae devices and arresters. Inquiries have also been received from several importers of English and European electrical goods, and undoubtedly a number of lines such as theirs will be submitted for approval during the coming year.

A revision of the specifications issued to date is now under way in order that they may be brought up to date and into line with improvements accepted by the manufacturers and other interests concerned. A specification for Christmas Tree lighting sets allowing considerable leeway from the standard applying to flexible cords has been adopted. This will result, it is believed, in reducing the

fire hazard from Christmas trees on which candles are now used, by encouraging the use of electric lights instead.

For the re-examination service a schedule of fees has been adopted and the original agreement for this service has been superseded by a new form which requires the applicant to pay a fixed sum per annum in advance for each line of devices or appliances which receives the approval of the Commission. In line with the new schedule of fees a scheme of re-examination annually or quarterly has been worked out and put into operation during the year. Likewise the label service has been put on a regular schedule and inspections are made at the factory of each user of this service monthly, wherever possible. The number of labels distributed this year has been practically double that distributed in the previous fiscal year.

The work of following up advertisements in the technical and daily press and electrical displays at exhibitions and fairs has been carried on vigorously and has resulted in the practical elimination of advertisements and displays of "unlisted" goods offered for sale in Ontario.

Meter and Standards Laboratory

While the year has been marked with a slight decrease of the independent work of the Meter Laboratory, there has been a great volume of work done in co-operation with other sections. In many tests made in the field, especially upon new power houses and stations which were being placed in service, or rearranged, it has been possible to co-ordinate the work of this Laboratory with the High-Tension and Electrical Testing Laboratory, so that results could be obtained with greatest efficiency and general satisfaction. Almost every test is a special problem with its own individual characteristics, and for each a peculiar equipment of instruments and measuring equipment gives the best results. In assisting in the selection of this equipment, the Meter Laboratory has been of great help, and by the maintaining of a continual check on the accuracy of the apparatus, has eliminated many sources of controversy.

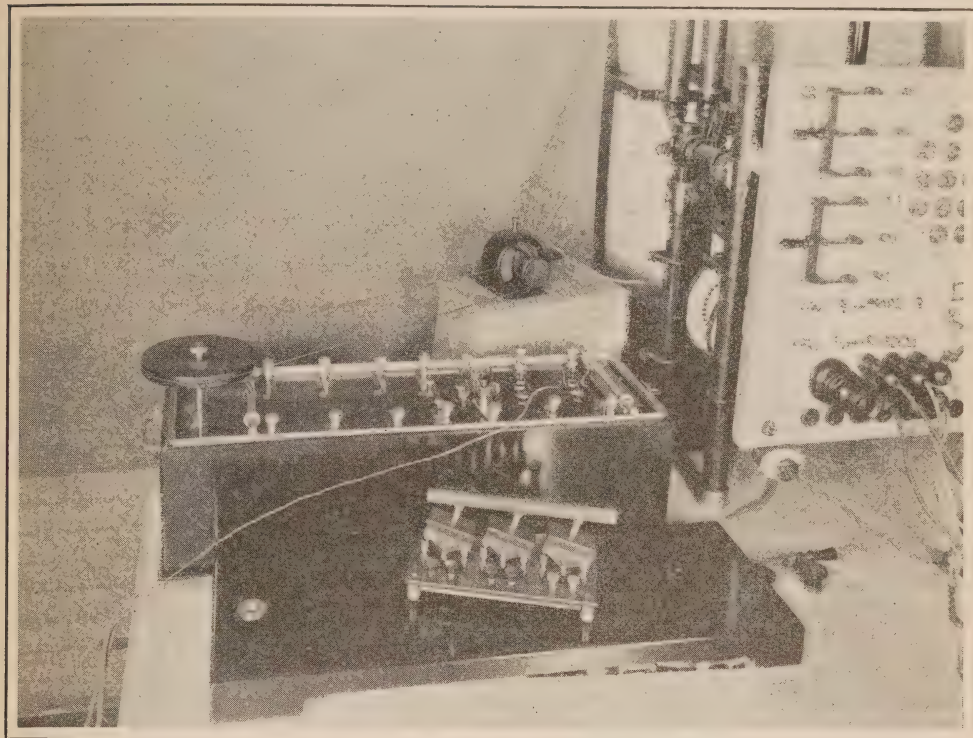
In a number of these field tests the oscillograph has proved of inestimable value. Practically all large generators now installed are required to withstand very severe short-circuit tests; and these produce in the circuits transient effects that may last but a very small fraction of a second—a period far too short to give dependable readings on instruments of the indicating type. Here the oscillograph is able to detect not only the maximum swing of current, but to give a permanent record of the exact time taken for a steady condition to be reached, and to furnish a complete history of conditions existing at the same time in auxiliary circuits. A number of such tests have been made, and engineering information gathered which could not have been obtained satisfactorily in any other manner. In a transforming station, where it was feared that a rearrangement of connections which was under way with a view to increasing the system capacity might be productive of conditions which would cause trouble on neighbouring communication circuits, the oscillograph was called into service and the most desirable conditions of operation quickly and definitely determined. When such outside tests as these are not in progress, the oscillograph is usually kept set up in the Laboratory, and can be put into service at short notice. It has been possible thus to supplement many tests which were in progress in the Laboratories with oscillographic records, thereby adding immensely to the value of the tests. Among these may be mentioned tests on rectifiers, telephone circuits and experimental systems of transformer connections.

Throughout the earlier part of the year there continued a great activity in the movement of watthour meters through the Meter shops, there being a larger demand for second-hand apparatus, and also for new meters, many of which received their Government inspection at the Laboratory. For some weeks in the summer, watthour meter work was comparatively quiet, but with the coming of the autumn and the shortage of coal, encouraging the use of small heater units, there was a distinct revival of meter work and considerable shipments were handled in the Meter shops. Several new types of meters have come into use in the year and opportunity has been taken to make careful tests upon these at the Laboratories, their performance being carefully watched afterwards in service, under the variety of conditions of use existing upon the Commission's systems. Besides watthour meters, a few new types of measuring instruments, such as demand indicators and graphic meters have made their appearance, and have been submitted to complete tests to prove their worthiness.

A number of meetings of the Watthour-Meter Sub-Committee of the Canadian Engineering Standards Association have been attended, and a standard specification for meters, agreeable to manufacturers, users and federal authorities is nearing completion. The Laboratory has a representative also upon the Instruments and Measurements Committee of the American Institute of Electrical Engineers and by his work the Commission is kept in the closest touch with the most up-to-date practice in metering, both in Canada and the United States.

The repairing of instruments and various testing devices for other departments and for outside parties has continued as heretofore in considerable volume, full use being made of the Instrument shop and the Standards equipment. Indicating and recording instruments, meggers, time switches, relays and testing sets may be mentioned. The Instrument shop has been busily engaged in co-operation with other departments of the Laboratories in the construction of special equipment needed in individual tests. The investigation of stresses in bus-bars, referred to elsewhere in this report, called for apparatus of a most delicate and special nature, which required many modifications and additional refinements as the tests proceeded. This equipment was all constructed in the Instrument shop, the closest co-operation being required between the instrument builders and the engineers conducting the test. Upon completion of this investigation, much of the apparatus which was developed for the tests was salvaged and has been added to the permanent equipment of the Laboratories. A large part of the radio equipment being placed in use by the Commission for purposes of communication has been built and assembled in this shop. Here, also, have been constructed a number of pieces of permanent equipment for the Structural Materials Laboratory, and for the production of test specimens used in investigations of the characteristics of steels and other materials which have become a matter of routine.

Full advantage has been taken of the occasional quiet periods in the work of the Laboratory to improve the equipment generally, bringing it up to higher degrees of accuracy and efficiency of operation. This applies particularly to the standardization apparatus. While, as described in last year's report, this equipment may be looked upon as being in permanent shape, new possibilities are continually becoming evident and slight improvements ever suggesting themselves. Some rearrangements of the wiring of the test tables in the Standards room have been made, and a number of valuable improvements, built for the most part by the Instrument shop, added. An oil-immersion tank has been constructed for the standard resistances, and arranged for quick and convenient connection of any unit, as required in standardization work. The units terminate



METER AND STANDARDS LABORATORY

Triple reversing switch for wattmeter testing and oil bath for standard resistances

in mercury cups, and are thoroughly protected from the effects of moisture and other disturbing influences. This tank is illustrated in an accompanying cut. At one end is a small circulating pump, which is driven by an outside motor, and serves to keep the oil, when in use, at a uniform temperature. It is of interest, here, to note that, whereas it was formerly supposed that the only oil suitable for immersion of these standard resistances was a very expensive grade, obtainable only in the United States and at a very high price, the Chemical Laboratory was able to derive a formula for an equally satisfactory oil, which was purchased at a reasonable figure from a local refinery.

Little new apparatus has been purchased for the Meter Laboratory, the present very complete equipment of meters and measuring devices being found capable of adaptation to practically all the work encountered in the routine of the Laboratories and to the special tests upon which the engineers have been engaged. At the same time it has been possible to place much of the metering apparatus at the disposal of other departments of the Commission and outside customers, for which service a moderate rental is charged.

Photometric Laboratory

The Photometric Laboratory is entrusted with all tests in which the measurement of light is involved, and is frequently consulted regarding the planning of the lighting for various classes of service.

The greater proportion of the work of this section is the testing of lamps manufactured for the Commission under contract. Before contracts are placed

the lamp situation is studied and the results of the previous year's experience reviewed. New developments in lamp making are investigated when possible. With data thus accumulated the specifications of efficiencies, life performance and tolerances are decided upon for the next year's lamp supply. The efficiencies are studied with special reference to the rates for current for lighting, prevailing throughout the districts served by the Commission, the aim being to secure lamps that will give economical and reliable service.

The lamp business for the coming year appeared to be of sufficient volume to justify the placing of a resident inspector in the factory supplying the lamps, and early in the fall this plan was carried out. A member of the staff was transferred to the factory and has direct supervision of all lamps made for the Commission. This inspector makes the regular inspection and tests to detect defects and measures the lamps to determine their conformity with specifications. Samples of lamps fulfilling requirements are forwarded to the Laboratory for life test.

In addition to these duties the inspector, who receives copies of orders, directs the shipping. It has been found that this plan saves much time and enables shipments to be made direct to the purchasers when desirable, in addition to eliminating the delay caused by rejected shipments when inspection is made at the Laboratory.

This section has co-operated with the engineering department in designing a system of signal lighting for Queenston generating station and is making tests of lamps for this purpose.

Many important details of the lighting of Queenston and some other stations have been designed by this section.

In addition to the Commission's own requirements systems have been planned and recommendations made for lighting several churches, an office, a collegiate institute and for the flood-lighting of an office building.

The measurement of the absorption of light of enclosing globes has been reduced to a routine basis, and a scale of charges for such work has been decided upon. By making some slight additions to the equipment of the 7-foot sphere photometer such work can be done quickly and at very low cost.

The selection of suitable glass for the panels of a street lighting lantern involved the measurement of the transmission of light by several samples of glass submitted. By this means the characteristics of the different samples were determined and the one best fulfilling the requirements was selected.

Tests have been made on train lighting globes, interior lighting reflectors, street lighting globes, automobile headlights and street illumination.

During the year the specifications for the testing of automobile headlight devices have been revised.

Engineering Materials Laboratory

The character of the work carried out by this Laboratory is the same as has been described in past reports to which the reader is referred. Only a few of the more interesting tests and investigations performed in the past year will therefore be described here.

Concrete Inserts

The special size and design of the bus insulators for the Queenston power house raised the question of a suitable method of fastening these to the concrete of the floors, walls and ceilings. Ordinarily a metal plug known as an "insert"

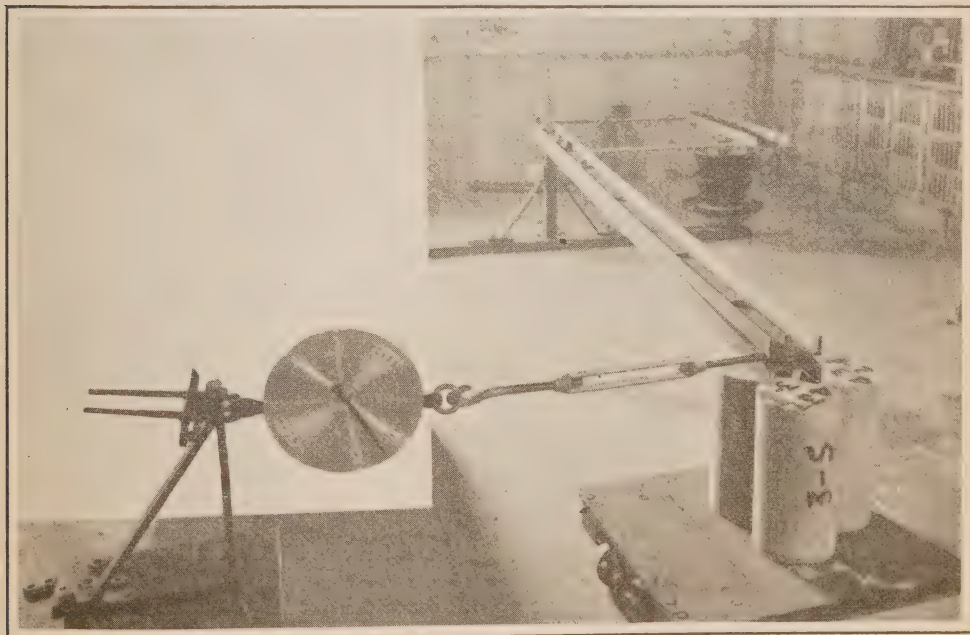
and drilled to receive a bolt of proper size is embedded in the concrete at the time the concrete is placed. These inserts take many forms, each manufacturer claiming special advantages for the particular type made by him. A number of these inserts were submitted to the Laboratory for comparative tests. As a result of these experiments it was found that the effectiveness of an insert was almost altogether due to the depth to which it was embedded in the concrete and not to any projections or lugs with which it was embellished; that the only projection required was a shoulder on the end inserted in the concrete to prevent the insert pulling out. With this information an insert was designed having a pull-out strength of 16,000 pounds and which could be made from a drop forging at a cost very much less than that of the cast-iron insert ordinarily used.

Floor Hardeners

A great many compounds are available for the treatment of concrete floors and each is claimed to have advantages over all others. In order to obtain information concerning these, comparative tests were made on a number, both of the integral and surface treatment type. Concrete panels made up in a manner similar to the top course of a concrete floor were treated with the different preparations and subjected to mechanical abrasion test.

The cut reproduced overleaf illustrates the apparatus used in making these tests. As will be seen, carborundum cylinders fit into upright pipes and rest on the concrete slabs under test and these in turn are fastened to the reciprocating table driven by the electric motor.

It was found in the case of the surface treatments that all were based on the well-known action of the fluosilicate compounds on concrete and that their effectiveness could be approximately predetermined from a knowledge of their chemical analysis. A floor hardener of this type made up in the Chemical



STRUCTURAL MATERIALS LABORATORY

Torsion test on large post-type insulator

Laboratory proved as efficient as the best of those tested. The integral hardeners tested were made up mainly of calcium chloride and the results obtained with them were those which could be expected from the use of this salt.

Line Materials

Tests were carried out on different forms of strain and dead-end clamps. From the information gained from these tests a clamp of each type was finally obtained which was lighter in weight, neater in appearance and of better holding power than the clamps then in use.

A particularly interesting series of tests was made on large post-type insulators. It was necessary to test these under a purely torsional load of 40,000 inch-pounds and a purely bending load of 40,000 inch-pounds. To do this the machine shown in an adjacent illustration was constructed. As shown, it is set up for the torsion test, but with a few simple changes it was possible to use the same machine for the bending test.

Metallurgical Studies

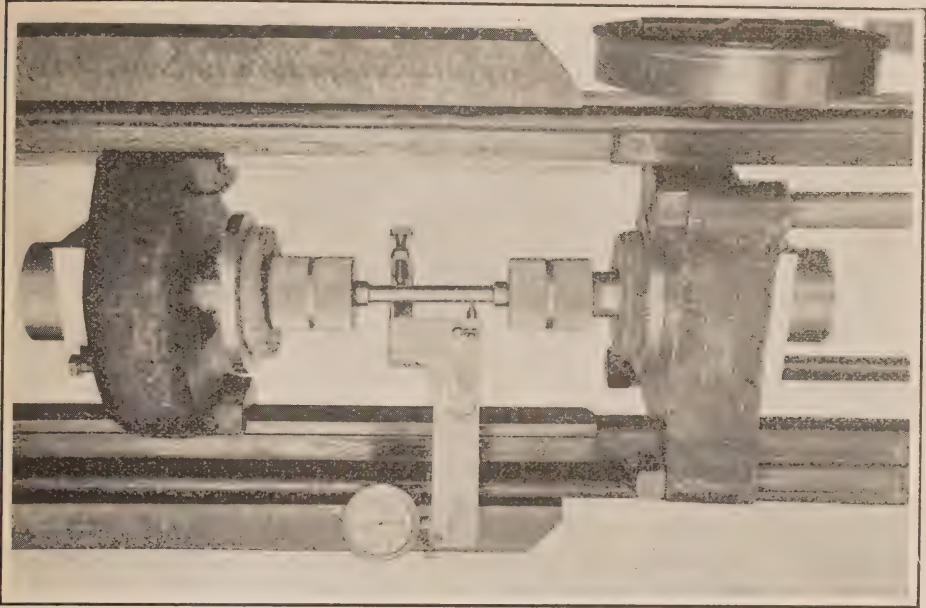
The Laboratory has co-operated in the investigation to determine the cause of the failure of No. 15 generator at the plant of the Ontario Power Company. Physical, chemical and microscopic studies have been made of the materials used in the construction of this machine and much valuable information was secured.

Few additions of note were made to the equipment of this Laboratory during the year. Provision has been made for the calibration of steel tapes, using as a standard a master tape calibrated by the Department of the Interior, Canada. The standards of one of the universal testing machines were extended to provide for tests upon line hardware assembled in place on transmission cable. This extension has proved very valuable.

After some experience with the commercial type of ball and socket specimen holders used to prevent eccentric loading of the standard tension test specimen for metals, an improved form of this device was designed and built in the Laboratory and embodied several special features. It could be used on any standard testing machine, it could be operated much more quickly than the usual type, it would not drop out of the grips and it was protected against the sudden shocks occurring when the test specimen ruptured. It is illustrated in a cut reproduced herewith.

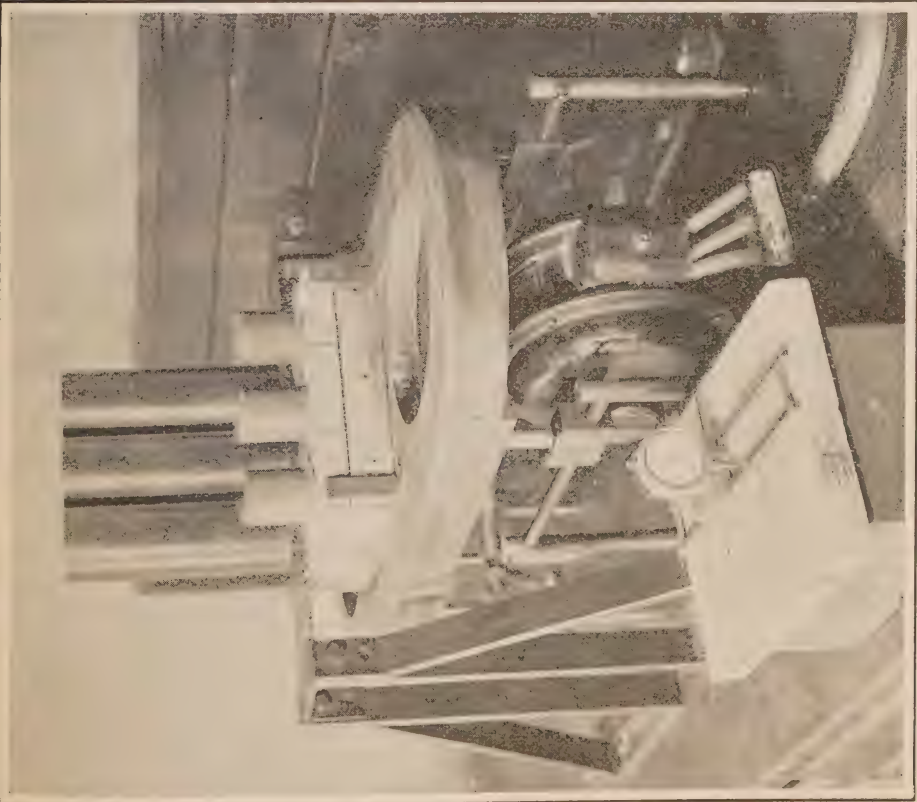
Standard instructions have been prepared for the use of the inspectors covering all of the principal materials usually inspected by this branch of the Laboratories. These instructions are prepared in loose leaf form, and are to be revised annually as necessary to keep them thoroughly up to date.

Certain standards of materials and workmanship are necessary in the construction of any structure, and these are covered by the purchaser's specifications. Many different specifications exist, all having the same standard of accomplishment in mind, but differing in some minor requirement or perhaps only in wording. During the year the inspection engineers of the Laboratories in co-operation with the designing engineers of the other departments have developed a set of standard clauses covering materials and workmanship for steel structures. Standard specifications for concrete are likewise in preparation.



STRUCTURAL MATERIALS LABORATORY

Self-aligning grips for testing metals in tension—showing test piece in place



STRUCTURAL MATERIALS LABORATORY

Apparatus used for wear tests of concrete floor preparations

Chemical Laboratory

The activities of the Chemical Laboratory do not differ materially from year to year. Many different kinds of tests are carried out and valuable co-operation is given to the other Laboratories in connection with the problems upon which they are working. New materials of all kinds are referred to it by the Purchasing department for examination and report, and while none of these tests is of sufficient importance to warrant special mention, in the aggregate they form a considerable proportion of the total work done and are of great value to the Commission.

Problems peculiar to the Chemical Laboratory are protective compounds and lubricating materials. The former includes paints, metallic coatings such as galvanizing and wood preservatives. Investigation work along each of these lines is in progress almost continuously.

Photographic Branch

This branch of the Laboratories has been very busy during the year, owing principally to the Queenston-Chippawa development. During the period of greatest activity weekly visits were made to Niagara by the photographer and at present progress pictures are being taken every month. A considerable number of airplane views of the development was taken during the summer. An "airplane" map was also constructed showing the power canal and the Niagara river from Chippawa to Queenston; the pictures for the map were taken from a height of 2,500 feet. For this work a special camera was built in the Laboratory workshop. Official pictures were also taken during the year of the 110,000-volt line from Queenston, the rural underground installation in Saltfleet township, the new Hamilton outdoor station, and Ranney Falls generating station.

The Blueprint section received 2,250 orders during the year.

SECTION IX

FINANCIAL STATEMENTS

EXPLANATORY STATEMENT RESPECTING THE ACCOUNTS

The Hydro-Electric Power Commission of Ontario believes that a satisfactory understanding of the manner in which the various operations of the Commission are financed will contribute greatly to the interest of those engaged either directly or indirectly with the work of the Commission.

In this section of its Annual Report the Commission presents detailed financial statements which may easily be understood although, upon casual inspection, they might appear somewhat complex.

For the purpose of financial statement, the various systems are treated as quite separate units for each of which similar statements and details are given. Many of the pages which follow, therefore, simply repeat for each system the class of data which is presented for the first system dealt with, namely, the Niagara system. In order, therefore, to possess a ready grasp of all the figures presented in this and other similar reports of the Commission, all that is necessary is to have a true understanding of the financial procedure followed in connection with one system and with one municipality.

The accounts of the Hydro-Electric Power Commission of Ontario are subjected to a strict audit by auditors specially appointed by the Provincial Government. The accounts of the individual municipalities are prepared according to approved and standard practice and are also duly audited. In fact, in preparing the various financial reports and statistical tables relating to all Hydro enterprises, the greatest care is exercised and all statements are presented in such form that they may be comprehensive and at the same time easily understood.

It is proposed here to explain briefly the general plan of the financial operations of the Commission and in the course of the explanation to illustrate by reference to specific data.

The balance sheet which immediately follows, exhibits the assets and liabilities of the Hydro-Electric Power Commission of Ontario in respect of all of its undertakings, except those of the "Central Ontario and Trent" and "Nipissing" systems—which owing to special conditions are separately submitted—and of the Ontario Power Company, Limited, the financial report of which is separately presented at the end of this section of the Report.

It will be understood that this statement of assets and liabilities and the financial tables which follow relate to the properties constructed and operated by the Commission as trustees for the municipalities; and the balance sheets, operating reports and statistical data appearing in Section X, under the heading of "Municipal Accounts," refer to the operation of the municipalities' properties within the boundaries of those municipalities which have contracted with the Commission for their supply of electrical energy.

The whole Hydro-Electric undertaking of the municipalities, so far as finances are concerned, is operated in what may be termed two distinct divisions: first—the division which covers the generation, transformation, and transmission of electrical energy in wholesale quantities to municipalities. The equipment essential to this work is constructed, or otherwise provided, and also operated on behalf of the associated municipalities by the Hydro-Electric Power Commission of Ontario.

The second division comprises the various operations involved in the local distribution by various municipal utility commissions, within their respective municipalities, of the electrical energy which they purchase from the Hydro-Electric Power Commission. The work performed by the various municipal commissions in their local distribution and sale of electrical energy is under the supervision of the Hydro-Electric Power Commission.

To convey a better understanding respecting the operations of Hydro undertakings, the financial results of the two divisions just mentioned have been combined and are shown in balance sheet form immediately following statement "A" in Section X of this Report. These balance sheets are headed "Statement combining the Hydro-Electric Power Commission's plant and reserves with the assets, liabilities and reserves of the 'Hydro' Municipal Utilities as at 31st December, 1922," and information respecting the several columns of figures is given in a statement immediately preceding these balance sheets.

The ultimate source of all revenue—whether for the larger operations of the Hydro-Electric Power Commission or for the smaller local operations of the municipalities—is, of course, the consumer. The revenue collected from the service supplied by the municipalities is divided so as to pay for the power purchased from the Commission and also for the expense incurred by the local utility in supplying its customers.

The portion of the total revenue remitted to the Hydro-Electric Power Commission—and this remittance appears in the financial statements as the total "Cost of Power"—must be sufficient to pay the municipality's proportion of the expenditures made by the Commission on behalf of the municipality, in connection with the particular system to which the municipality belongs, in order to provide, transmit and sell to the municipality the agreed upon amount of power. This remittance to the Commission includes a sinking fund and a depreciation or renewals reserve fund; the former making full provision for the liquidation of the capital investment and the latter creating a fund considered to be fully adequate to renew or rebuild any section of the various properties when necessary. The Hydro-Electric Power Commission of Ontario obtains its revenue from power service—that is from the sale of electricity generated for and transmitted to the municipalities in bulk—and with this revenue operates and maintains its system and also creates the reserves just mentioned. Power service is given to each municipality "at cost."

All municipalities have current expenses to meet similar to the expenses of the Commission and have adopted the same sound financial procedure with respect to the operation of their local utilities. In other words, concurrently with the creation of funds to liquidate their debt to the Commission and provide a reserve to rebuild generating, transforming, and transmission systems, the municipalities are taking similar action with respect to their local Hydro systems.

From the foregoing explanation it will be seen that the revenue obtained from "Hydro" light and power customers is sufficient to meet *all* operating and maintenance costs and capital charges in connection with (a) individual municipal investments and (b) collective municipal investments made through

the agency of the Hydro-Electric Power Commission, and in addition there is being provided a fund for the purpose of renewing or rebuilding the properties—if necessary—of the whole Hydro installation from the generating stations to and including the municipal systems.

It will be profitable to consider, very briefly, the basic principle upon which the whole Hydro project is founded. This is set out in the contracts under which the municipalities enter into the partnership of which the Commission acts as trustee. The rates at which power is supplied to the various municipalities vary with the amount of power used and the distance from the source of supply. The entire capital cost of the various power developments and transmission systems are pro-rated annually to the connected municipalities, according to the relative use made of the lines and equipment. Each municipality is required to assume responsibility for just that portion of capital employed in delivering electrical energy to it, together with such expenses as are incident to that particular portion of the investment. Municipalities are not charged with expenses connected with equipment or plant from which they derive no benefit or are in no way interested. The entire annual expense of operation, maintenance, administration, interest and sinking fund and full depreciation are paid out of revenue collected from the municipalities, through the medium of thirteen power bills rendered by the Commission each year. Power bills are rendered at an interim estimated rate each month during the year and a thirteenth bill—or credit memorandum as the case may be—is rendered at the end of the year, when the Commission's books are closed and the actual cost determined.* There is no burden on the taxpayers or on non-users and no avenue through which losses, should they occur, could be absorbed, except by a direct charge to the contracting municipalities for power supplied. It should be noted that the sinking fund on the debentures is treated as an operating expense and that, therefore, the municipalities are not only paying the interest on the investment, but are also paying off the principal by means of a sinking fund and, in addition, are providing for the perpetuity of the system through an adequate depreciation fund.

The results obtained by the annual adjustments of the Commission's capital investment, operating expenses and fixed charges as they affect individual municipalities are clearly shown in the tables for the respective systems.

These financial statements are typical of others appearing in this section of the Commission's Annual Report, and if their significance is fully appreciated there can be no misconception of the relationship of the municipalities to the Commission's operations.

To further illustrate the foregoing explanatory comments a typical Operating Report is now submitted, viz., that of the Hydro-Electric Utility of the city of Sarnia:

*The financial year for the Commission accounts ends on October 31. The financial year for the Municipal accounts, however, ends on December 31, and the Municipal accounts are made up to this date, and so recorded in Section X.

SARNIA HYDRO SYSTEM

OPERATING STATEMENT FOR THE YEAR 1922

REVENUE

Revenue from Sarnia Hydro customers, for year.....\$198,856.82

EXPENSES

Representative illustration of expenses incurred by Hydro-Electric Power Commission on behalf of a municipality in connection with the supplying of its electrical energy. These data really show—as determined by annual adjustment—what it costs the Commission to supply the municipality with its power. See Annual Adjustment Statement, page 206 for the city of Sarnia as follows:

Cost (pro. share) of generating and transforming at Niagara Falls, Ontario.....	\$55,325.76
Cost (pro. share) of administering, maintaining and operating Commission's transformer stations and transmission lines...	22,457.89
Interest on Sarnia's proportionate share of capital investment in stations and lines..	19,941.89
Renewal reserves (pro. share) yearly provision for plant renewal purposes.....	5,459.62
Contingencies (pro. share) yearly provision...	3,297.90
Payments to sinking fund (pro. share).....	5,786.99
	<hr/> \$112,270.05

Expenses incurred by a municipality through its utility commission in connection with the sale of electrical energy to consumers. Consult the section dealing with the Municipal Accounts:

Operation, maintenance and administrative expenses, etc.....	\$40,386.99
Interest and fixed charges on debenture debt.	25,833.00
Depreciation charge.....	9,662.00
	<hr/> \$75,881.99
Total expenses charged against the revenue from customers of the Sarnia system.....	\$188,152.04
Net surplus for the year.....	<hr/> \$10,704.78

The city of Sarnia situated at the extreme end of the Niagara system, 185 miles distant from source of power, Niagara Falls, Ontario, was connected to the system, December, 1916. This utility has fulfilled every monetary obligation imposed upon it by the Power Commission Act. With the close of the sixth year of operation its financial condition as set forth in the municipalities balance sheet (see Statement A, in Section X) stands as follows.

Total assets, \$542,157.76; total liabilities, \$283,935.37; reserves and surplus, \$258,222.39. The last mentioned figure comprises the following items:

Debentures paid.....	\$ 39,092.81
Reserve for renewal of plant (local).....	57,040.00
Sinking fund equity in Hydro-Electric Power Com- mission system.....	14,142.76
Surplus.....	147,946.82
	<hr/>
	\$258,222.39

In addition to these reserves the Hydro-Electric Power Commission of Ontario has collected from this utility during the period under review the sum of \$56,621.58 which represents Sarnia's proportionate share of renewals reserve retained by the Commission for purposes as hereinbefore mentioned.

HYDRO-ELECTRIC POWER

Detailed Statement of Assets

POWER

ASSETS

Niagara System:			
Right-of-way.....		\$1,670,895.30	
Steel-Tower Lines.....		5,622,611.87	
Transformer Stations.....		10,779,068.25	
Wood-Pole Lines.....		2,806,734.49	
		<hr/>	
			\$20,879,309.91
Rural Lines {	Rural Construction.....	\$307,411.13	
	Rural Power Districts Construction.....	532,129.72	
		<hr/>	
			839,540.85
			<hr/>
			\$21,718,850.76
Niagara Power Development Works:			
Expenditure to date on Construction Work at Niagara Falls.....			65,642,615.86
Severn System:			
Power Development.....		\$654,286.51	
Wood-Pole Lines.....		566,276.93	
Transformer Stations.....		211,549.91	
		<hr/>	
			\$1,432,113.35
Rural Power Districts Construction.....		10,188.55	
		<hr/>	
			1,442,301.90
Eugenia System:			
Power Development.....		\$994,737.54	
Wood-Pole Lines.....		804,940.51	
Transformer Stations.....		261,265.66	
		<hr/>	
			\$2,060,943.71
Rural Lines.....		2,239.07	
Rural Power Districts.....		3,070.83	
		<hr/>	
			2,066,253.61
Wasdells System:			
Power Development.....		\$144,379.35	
Wood-Pole Lines.....		203,186.79	
Transformer Stations.....		31,485.22	
		<hr/>	
			\$379,051.36
Rural Lines.....		14,955.95	
		<hr/>	
			394,007.31
Muskoka System:			
Power Development.....		\$148,473.74	
Wood-Pole Lines.....		54,420.23	
Transformer Stations.....		9,896.85	
		<hr/>	
			212,790.82
St. Lawrence System:			
Wood-Pole Lines.....		\$521,052.01	
Transformer Stations.....		484,747.25	
		<hr/>	
			\$1,005,799.26
Rural Power Districts Construction.....		29,462.82	
		<hr/>	
			1,035,262.08
Rideau System:			
Power Development.....		\$756,926.70	
Wood-Pole Lines.....		261,964.20	
Transformer Stations.....		60,855.90	
		<hr/>	
			1,079,746.80
Thunder Bay System:			
Power Development (Nipigon River).....		\$5,772,133.31	
Transmission Lines " " (Port Arthur).....		602,161.90	
Transformer Station " " " ".....		149,681.01	
Transformer Station (Port Arthur).....		89,317.45	
Transmission Lines " ".....		29,476.46	
		<hr/>	
			6,642,770.13

COMMISSION OF ONTARIO

and Liabilities—31st October, 1922

UNDERTAKINGS

LIABILITIES

Provincial Treasurer:

Cash Advances for Niagara and other Systems.....	\$44,938,798.24	
Cash Advances for Niagara Power Development Works..	61,278,545.52	
		\$106,217,343.76

Unexpended portion of the sum appropriated by the Legislature to cover expenditures by the Commission on account of the Province.....	58,230.11
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Bank of Montreal:

Cash Advances re Construction of Third Pipe Line on Ontario Power Company's Property.....	1,200,000.00
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Debentures issued to cover purchase of Capital Stock of Ontario Power Company of Niagara Falls.....	\$8,000,000.00	
Interest accrued thereon.....	80,000.00	
		8,080,000.00

Debentures issued to cover the purchase price of the Capital stock of The Toronto Power Co., Ltd., and in certain Electrical Power Equipment of the Toronto and York Radial Railway.....	\$619,000.00	
Interest accrued thereon.....	15,475.00	
		634,475.00

Debentures issued for the purpose of retiring the 1921 issue of the Ontario Power Company of Niagara Falls.....	\$3,200,000.00	
Interest accrued thereon.....	67,856.16	
		3,267,856.16

Debentures issued to cover purchase price of Essex System..	\$226,000.00	
Interest accrued thereon.....	3,875.00	
		229,875.00

Debentures issued to cover purchase price of Thorold System..	\$100,000.00	
Interest accrued thereon.....	1,666.67	
		101,666.67

Debentures Assumed:

Line to Brick Companies at Streetsville.....	\$4,267.26	
Muskoka Power Development.....	40,678.96	
	\$44,946.22	
Interest accrued thereon.....	1,605.45	
		46,551.67

Accounts Payable.....	\$190,938.84	
Bond Interest Coupons Overdue, but not presented.....	59,016.50	
		249,955.34

Cash on deposit on account of Central Ontario System.....	363,400.20
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Insurance Department:

Outstanding Claims and Awards.....	\$618,547.86	
Surplus.....	38,197.54	
		656,745.40

Balances due to Municipalities in respect of amounts paid by them to 31st October, 1922, in excess of the cost of power supplied to them as provided to be paid under Section 23 of the Act:

Niagara System.....	\$110,368.85	
Severn System.....	111,145.03	
Eugenia System.....	27,830.22	
Wasdells System.....	1,682.25	
Muskoka System.....	11,534.56	
St. Lawrence System.....	25,945.04	
Rideau System.....	30,504.78	
Ottawa System (Nepean District).....	590.66	
		319,601.39

HYDRO-ELECTRIC POWER
Detailed Statement of Assets
POWER UNDER

ASSETS

Ottawa System:			
Meters, etc.....	\$2,748.91		
Rural Power Districts.....	23,200.83		
			\$25,949.74
Bonnechere River Storage System:			
Round Lake Dam.....	\$20,292.68		
Golden Lake Dam.....	11,092.81		
Interest on above to 31st December, 1916.....	2,780.25		
			34,165.74
Essex System:			
Purchase price of System.....	\$226,000.00		
Additional Expenditure to date.....	115,960.09		
			341,960.09
Thorold System:			
Purchase price of System.....	\$100,000.00		
Less: Credit Balance on Current Account.....	81,429.53		
			18,570.47
Service Buildings:			
Service Building and Equipment, Toronto.....	\$466,900.43		
Equipment of Storehouse and Garage, Hamilton.....	9,473.74		
Pole Yard and Equipment, Cobourg.....	20,070.79		
			496,444.96
Office Buildings:			
On University Avenue, Toronto.....	\$499,000.29		
On Corner Elm Street and Centre Avenue, Toronto....	161,356.87		
			660,357.16
Office Furniture and Equipment:			
At Toronto Office.....	\$104,852.52		
At Hamilton Office.....	2,157.61		
At Electrical Inspection Offices.....	5,330.70		
Library.....	2,172.38		
Stationery and Office Supplies.....	23,850.79		
			138,364.00
Automobile and Trucks.....			8,491.30
Inventories:			
Construction and Maintenance, Tools and Equipment...	\$264,068.28		
Construction Material and Sundry Supplies.....	761,611.99		
Maintenance Materials and Supplies.....	255,326.21		
			1,281,006.48
Capital Stock of Ontario Power Company of Niagara Falls.....			8,000,000.00
Investment of Capital Stock of Toronto Power Company, Ltd., and in certain			
Electrical Power Equipment of the Toronto and York Radial Railway....			619,258.00
Ontario Power Company of Niagara Falls:			
Re 6 per cent. 1941 Debentures issued by			
the Commission for the purpose of			
retiring the 1921 issue of the Power			
Company.....	\$3,200,000.00		
Interest accrued thereon.....	67,856.16		
			\$3,267,856.16
Expenditure in connection with construc-			
tion of Third Pipe Line.....	\$3,514,676.62		
Accrued Interest on \$8,000,000 Bonds			
issued by the Commission to cover			
the purchase price of the Capital			
Stock of the Power Company.....	80,000.00		
			3,594,676.62
Current Account.....			344,602.49
			7,207,135.27
The Toronto Power Co., Ltd., Current Account.....			191,820.96
Toronto and York Radial Co., Current Account.....			59,375.00
Sinking Fund:			
On deposit with Provincial Treasurer, including interest			
allowed thereon.....	\$638,699.16		
Invested in Securities of the Province of Ontario which are			
deposited with the Provincial Treasurer—par value			
\$827,000.00.....	827,000.00		
Interest accrued thereon.....	18,964.03		
			1,484,663.19

COMMISSION OF ONTARIO

and Liabilities—31st October, 1922—Continued

TAKINGS—Continued

LIABILITIES

Reserves for Sinking Fund:

Municipalities—

Niagara System.....	\$1,740,390.63
Niagara Rural Lines.....	40,142.80
Severn System.....	83,613.38
Eugenia System.....	38,857.68
Eugenia Rural Lines.....	190.18
Wasdells System.....	17,137.42
Wasdells Rural Lines.....	885.27
Muskoka System.....	4,524.03
St. Lawrence System.....	27,677.90
St. Lawrence Rural Lines.....	.....
Thunder Bay System.....	22,115.45
Ottawa System.....	353.12
Bonnechere Storage System.....	3,936.99

\$1,979,824.85

Service and Office Buildings—

Service Buildings.....	\$52,676.94
Office Buildings.....	67,377.16

120,054.10

Reserves for Renewals:

Contributed by Municipalities—

Niagara System.....	\$2,475,421.02
Severn System.....	132,743.72
Eugenia System.....	137,200.69
Wasdells System.....	35,564.12
Muskoka System.....	15,215.17
St. Lawrence System.....	64,743.78
Rideau System.....	33,771.00
Thunder Bay System.....	42,433.51
Ottawa System.....	434.59

2,937,527.60

In respect of Service and Office Buildings—

Service Buildings.....	\$111,984.52
Office Buildings.....	12,303.55

124,288.07

Reserves for Contingencies:

Niagara System.....	\$4,853.87
Severn System.....	29,220.08
Eugenia System.....	12,801.38
Wasdells System.....	6,068.13
Muskoka System.....	3,375.57
St. Lawrence System.....	6,255.17
Rideau System.....	7,673.25
Thunder Bay System.....	4,601.65

74,849.10

Interest reserved for the benefit and credit of Municipalities which have paid Sinking Funds—being the Interest return from the Investment of such funds in excess of the 4 per cent. Interest already allowed by the Commission thereon.....

13,083.97

Surplus arising from Departmental Operations in Service Buildings.....

22,168.26

HYDRO-ELECTRIC POWER

Detailed Statement of Assets

POWER UNDER

ASSETS

Investments:

Debentures of the Hydro-Electric Power Commission purchased (issued in connection with the purchase of Capital Stock of the Ontario Power Company) par value \$115,000.00.....	\$79,844.50	
Interest accrued thereon.....	1,150.00	
		\$80,994.50

Cash:

In Banks.....	\$1,453,407.64	
In hands of employees as advances on account of expenses.....	119,937.87	
In Bank to pay Bond Interest Coupons overdue, but not presented.....	59,016.50	
		1,632,362.01

Accounts Receivable:

Due by Municipalities in respect of Construction Work and Supply Sales....	\$563,402.07	
Less: Reserve for Doubtful Accounts....	11,288.36	
		\$552,113.71
Due by Municipalities in respect of Power Accounts....		1,185,061.22
"Sinking Fund and Interest" and "Consumers" Accounts owing in respect of Rural Lines.....		78,838.82
Due by Town of Renfrew for Water from Bonnechere Storage System for power purposes.....		7,116.75
Balances due by Municipalities in respect of the Costs of Power supplied to them, as provided to be paid under Section 23 of the Act:		
Niagara System.....	\$343,650.35	
Severn System.....	14,620.23	
St. Lawrence System.....	10,517.08	
Waddell System.....	6,634.10	
Eugenia System.....	33,761.96	
Muskoka System.....	3,784.15	
		412,967.87
		2,236,098.37
Walkerton Quarry Mortgage, securing Balance of Sale Price...	\$260,000.00	
Interest accrued thereon.....	10,670.69	
		270,670.69

Amount recoverable out of future revenues from the City of Port Arthur, and other Power Customers on The Thunder Bay System—being that portion of the interest on the Nipigon Development which was deferred as at 31st October, 1922.....		318,320.65
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Receivable from the Province of Ontario as the amount owing under the Rural Hydro-Electric Power Distribution Act of 1921 in respect of bonus to primary rural lines completed and in operation on 31st October, 1922.....		202,953.07
Balance on interest account to be charged against operations in the year following.....		49,674.94

Work in Progress:

Expenditure on account of various Systems chargeable upon completion to—		
Capital Construction.....	\$64,624.23	
Operating and Maintenance Expenses.....	3,896.93	
		\$68,521.16

Insurance Unexpired.....		49,672.42
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COMMISSION OF ONTARIO

and Liabilities—31st October, 1922—Continued

TAKINGS—Continued

LIABILITIES

Contingent Liabilities:

In respect of Contracts entered into, for works under construction.....	\$2,140,835.17
In respect of outstanding Bonds of The Ontario Power Company of Niagara Falls, and the Ontario Transmission Company, Limited.....	10,691,000.00

HYDRO-ELECTRIC POWER
Detailed Statement of Assets
RADIAL RAILWAY

ASSETS

Sandwich, Windsor and Amherstburg Railway:		
Cost of Capital Stock, and Plant Assets of Company....	\$2,039,000.00	
Advances for Construction and Extensions and Operations.....	\$1,100,000.00	
Less: Current Account.....	40,997.95	
	\$1,059,002.05	
Guelph Radial Railway:		\$3,098,002.05
Purchase price of Railway.....	\$150,000.00	
Less: Instalments paid.....	5,005.69	
	\$144,994.31	
Proceeds of Sale of Bonds.....	\$150,000.00	
Proceeds of Loan from Bank of Montreal	115,000.00	
	265,000.00	
Less: Cash held by the Commission....	8,021.57	
	256,978.43	
York Radial Railways:		401,972.74
Purchase price of Road and Equipment of the Metropolitan, Scarborough and Mimico Divisions.....		2,375,000.00
Port Credit to St. Catharines Radial Railway:		
Expended upon purchase of Right-of-way.....	\$71,299.02	
Construction materials purchased.....	281,882.06	
Surveying, Engineering, Administrative Expenses and Interest.....	128,011.29	
		481,192.37
Toronto to Port Credit Radial Railway:		
Expended upon purchase of Right-of-way.....	\$631,231.87	
Surveying, Engineering, Administrative Expenses and Interest.....	148,803.87	
		780,035.74
Expended prior to 31st October, 1921, in connection with investigations, surveys, by-laws and reports on proposed Radial Railways.....	\$151,871.77	
Expended prior to 31st October, 1921, in connection with preparation of information for a submission of evidence to the Royal Commission which investigated Hydro Radial Railways.....	335,123.93	
	\$486,995.70	
Less cash advances by the Province on account of the above.	150,000.00	
	336,995.70	
Interest added thereto in year.....	21,904.72	
Balance carried as recoverable from the Province of Ontario.....		358,900.42
		\$133,206,532.76

NIAGARA

Operating Account for Year

COSTS OF OPERATION AS PROVIDED FOR UNDER SECTIONS 6C AND 23 OF THE ACT

Power Purchased.....	\$3,848,497.60	
Costs of operating and maintaining the Transmission Lines, Stations, etc., including the proportion of Administrative Expenses chargeable to the operation of this System.....	765,775.23	
Interest on Capital Investment.....	726,107.61	
Provision for Renewal of Lines, Stations, etc.....	195,255.52	
Provision for Contingencies:		
By charges against Municipalities.....	\$190,416.40	
By charges against contracts with Private Companies which purchased power.....	31,275.20	
Provision for Sinking Fund:		221,691.60
By charges against Municipalities.....	\$211,587.56	
By charges against contracts with Private Companies which purchased power.....	42,555.81	
		254,143.37
		\$6,011,470.93

COMMISSION OF ONTARIO

and Liabilities—31st October, 1922—Continued

UNDERTAKINGS

LIABILITIES

In respect of the Sandwich, Windsor and Amherstburg Railway:		
Debentures issued to cover purchase price of Capital Stock and Plant Assets.....	\$2,039,000.00	
Interest accrued thereon.....	7,646.25	
		\$2,046,646.25
Debentures issued for the purpose of making extensions and betterments.....		
	\$900,000.00	
Interest accrued thereon.....	18,020.55	
		918,020.55
Bank of Montreal—Advances.....		200,000.00
(Secured by hypothecation of \$261,000.00 Hydro Radial Debentures issued by Commission and \$190,000.00 Debentures of City of Windsor)		
In respect of the Guelph Radial Railway:		
City of Guelph—Purchase price of Railway payable thereto, in half yearly instalments, according to purchase agreement.....		
	\$150,000.00	
Less: Instalments paid.....	5,005.69	
		144,994.31
Debentures issued by the Commission for the purpose of making extensions and betterments.....	150,000.00	
Bank of Montreal—Advances.....	115,000.00	
		409,994.31
(Secured by hypothecation of \$150,000.00 Guelph Radial Railway Debentures issued by the Commission.)		
In respect of York Radial Railways:		
Debentures issued to cover the purchase price of the Road and Equipment on the Metropolitan, Scarboro and Mimico Divisions.....		
	\$2,375,000.00	
Accrued interest thereon.....	59,375.00	
		2,434,375.00
In respect of the Port Credit to St. Catharines Radial Railway:		
Bank of Montreal—Advances.....		500,000.00
(Secured by hypothecation of \$1,200,000.00 Hydro Radial Debentures, being part of issue of \$11,360,363.00 guaranteed by Province of Ontario)		
Contingent Liability:		
In respect of Contracts entered into for Construction Materials \$82,756.25		
		\$133,206,532.76

SYSTEM

Ended 31st October, 1922

REVENUE FOR PERIOD

Collected from Municipalities.....	\$4,959,172.76
Power sold to Private Companies.....	698,569.58
Add: Amounts due by certain Municipalities, being the difference between sums paid and the Costs of Power supplied to them in the year.....	\$307,322.34
Deduct: Amounts collected from certain Municipalities in excess of the sums required to be paid by them for power supplied in the year.....	110,182.33
	197,140.01
REVENUE.....	\$5,854,882.35
Loss on Sale of Power supplied to Private Companies (written off to Contingency Reserve).....	156,588.58

\$6,011,470.93

NIAGARA

Statement Showing the Amount to be Paid by Each Municipality as the Cost—under Received by the Commission from Each Municipality on Account of such Cost, upon Ascertainment (by Annual Adjustment) of the Actual Cost

Municipality	Interim Rates per Horsepower collected by Commission during year		Share of Capital Cost of system on which interest and fixed charges are payable	Horse-power supplied in year after correction for power factor	Cost of Power to Commission	Share of Operating	
	To Dec. 31, 1921	To Oct. 31, 1922				Operating Maintenance and Administrative Expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
Acton.....	32.00	37.00	36,641.23	249.1	4,178.92	1,811.56	1,493.43
Ailsa Craig...	49.00	49.00	37,377.93	124.4	2,086.94	1,177.87	1,583.08
Alvinston.....		95.95	31,099.14	25.9	434.50	1,322.24	983.76
Aylmer.....	45.00	50.00	54,655.55	199.6	3,348.50	2,525.18	2,341.80
Ayr.....	50.00	50.00	16,664.90	79.9	1,340.41	1,027.17	708.07
Baden.....	32.00	36.00	28,038.14	210.4	3,529.68	1,770.56	1,166.03
Beachville....	30.00	37.00	31,680.56	271.1	4,547.99	2,210.01	1,298.29
Blenheim.....	53.00	54.00	38,988.04	176.9	2,967.69	2,334.59	1,640.41
Bolton.....	60.00	60.00	40,473.99	114.1	1,914.15	873.02	1,738.48
Bothwell.....	60.00	55.00	33,282.72	136.5	2,289.93	1,634.83	1,385.97
Brampton....	20.00	26.00	102,723.76	997.8	16,739.15	4,785.43	3,473.52
Brantford....	20.00	25.00	330,713.15	5,152.6	86,440.31	16,193.37	12,928.41
Brigden.....	60.00	66.00	28,448.61	55.6	932.75	1,297.01	1,215.59
Burford.....	70.00	70.00	26,054.44	52.1	874.03	887.79	1,130.04
Burgessville...	48.00	52.00	7,044.95	25.3	424.43	541.63	301.99
Caledonia....	24.00	29.00	8,596.55	101.1	1,696.06	374.51	346.26
Chatham.....	28.00	31.00	297,627.44	2,742.9	46,015.05	13,076.05	11,306.08
Chippawa Vil. (see end of this table).....	46.00	48.00	43,720.45	174.8	2,932.46	2,232.28	1,868.44
Clinton.....	60.00	60.00	29,223.71	104.7	1,756.45	1,077.60	1,217.53
Dashwood....	56.00	62.00	20,783.97	47.2	791.83	913.82	889.07
Delaware.....	85.00	85.00	4,673.66	13.1	219.77	224.03	199.18
Dereham Twp.	37.00	37.00	10,347.66	57.4	962.95	1,055.27	437.15
Dorchester...	50.00	50.00	4,354.97	23.9	400.95	431.50	170.46
Drayton.....	70.00	72.00	26,643.07	51.3	860.61	927.26	1,156.06
Dresden.....	38.00	38.00	25,274.24	160.5	2,692.56	1,475.99	1,007.62
Drumbo.....	55.00	55.00	5,561.28	26.5	444.56	333.89	236.39
Dublin.....	60.00	70.00	10,235.89	28.1	471.41	905.77	441.52
Dundas.....	17.00	22.00	55,004.14	1,173.8	19,691.74	2,692.95	2,048.76
Dunnville....	40.00	50.00	82,816.04	296.3	4,970.75	1,096.38	3,641.75
Dutton.....	40.00	44.00	18,405.16	109.7	1,840.33	1,413.18	775.14
Elmira.....	38.00	38.00	56,931.42	417.5	7,004.00	3,245.64	2,373.05
Elora.....	40.00	44.00	42,935.43	244.1	4,095.04	1,767.62	1,772.78
Embro.....	75.00	80.00	18,730.91	51.3	860.61	1,032.13	807.95
Etobicoke Twp	27.00	27.00	46,617.14	517.5	8,681.62	3,736.68	1,852.35
Exeter.....	41.00	46.00	53,603.18	204.5	3,430.70	1,857.71	2,257.36
Fergus.....	44.00	47.00	39,779.67	218.0	3,657.18	1,762.98	1,646.34
Forest.....	60.00	60.00	44,778.77	130.3	2,185.92	2,354.01	1,885.46
Galt.....	21.00	25.00	273,913.77	3,616.2	60,665.58	14,826.07	10,649.25
Georgetown...	35.00	38.00	104,191.96	563.1	9,446.60	4,031.40	4,315.95
Glencoe.....	78.35	76.00	36,947.74	72.5	1,216.26	1,233.44	1,584.05
Goderich.....	50.00	55.00	147,283.42	460.3	7,722.02	6,626.49	6,334.99
Granville....	55.00	55.00	13,783.69	44.8	751.57	586.63	584.31
Guelph.....	20.00	25.00	287,598.30	4,458.4	74,794.37	17,483.67	10,528.41
Hagersville...	36.00	36.00	58,143.55	428.9	7,195.25	1,913.73	2,422.59

SYSTEM

Section 23 of the Act—of Power Supplied to it by the Commission, the Amount and the Amount remaining to be Credited or Charged to Each Municipality of Power Supplied to it in the Year Ending 31st October, 1922

Costs and Fixed Charges.			Total Cost of Power for year as provided to be paid under Section 23 of Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual Cost of Power by annual adjustment		Sinking Fund for the years mentioned hereunder charged as part of the Cost of Power in the year 1921-1922
Renewals	Contingencies	Sinking Fund			Credited	Charged	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
408.73	249.10	534.88	8,676.62	9,005.56	328.94	.....	1920-21
441.98	124.40	480.09	5,894.36	6,096.63	202.27	.....	1917-18
277.86	25.90	.....	3,044.26	2,489.89	.....	554.37	.....
652.83	199.60	.....	9,067.91	9,803.84	735.93	.....	.....
196.17	79.90	227.20	3,578.92	3,994.56	415.64	.....	1918-19
318.14	210.40	441.97	7,436.78	7,416.63	.....	20.15	1920-21
351.92	271.10	555.32	9,234.63	9,768.40	533.77	.....	1920-21
454.99	176.90	634.81	8,209.39	9,519.76	1,310.37	.....	1917-18
486.77	114.10	698.48	5,825.00	6,847.35	1,022.35	.....	1917-18
385.23	136.50	646.39	6,478.85	7,627.90	1,149.05	.....	1917-18
924.56	997.80	1,331.37	28,251.83	26,197.94	.....	2,053.89	1921-22
3,351.48	5,152.60	3,381.90	127,448.07	124,256.96	.....	3,191.11	1918-19
341.87	55.60	.....	3,812.82	3,583.89	.....	258.93	.....
317.78	52.10	283.86	3,545.60	3,646.97	101.37	.....	1917-18
84.22	25.30	64.78	1,442.35	1,298.82	.....	143.53	1916-17
92.06	101.10	132.37	2,742.36	2,851.05	108.69	.....	1920-21
3,040.88	2,742.90	3,612.55	79,793.51	83,886.13	4,092.62	.....	1917-18
519.90	174.80	725.78	8,453.66	8,079.85	.....	373.81	1918-19
339.36	104.70	304.33	4,799.97	6,279.40	1,479.43	.....	1917-18
249.63	47.20	.....	2,891.55	2,873.58	.....	17.97	.....
55.77	13.10	69.94	781.79	1,116.99	335.20	.....	1917-18
120.61	57.40	.....	2,633.38	2,123.13	.....	510.25	.....
46.93	23.90	79.49	1,153.23	1,196.63	43.40	.....	1918-19
325.23	51.30	.....	3,320.46	3,678.87	358.41	.....	.....
276.24	160.50	415.81	6,028.72	6,099.20	70.48	.....	1917-18
65.50	26.50	78.80	1,185.64	1,458.39	272.75	.....	1918-19
123.68	28.10	.....	1,970.48	1,917.22	.....	53.26	.....
508.83	1,173.80	732.71	26,848.79	25,130.21	.....	1,718.58	1921-22
1,034.59	296.30	.....	11,039.77	14,256.25	3,216.48	.....	.....
213.37	109.70	310.21	4,661.93	4,753.06	91.13	.....	1917-18
648.21	417.50	656.96	14,345.36	15,863.73	1,518.37	.....	1919-20
488.40	244.10	744.98	9,112.92	10,593.23	1,480.31	.....	1918-19
226.33	51.30	319.98	3,298.30	4,071.91	773.61	.....	1918-19
493.96	517.50	.....	15,282.11	13,972.48	.....	1,309.63	.....
628.54	204.50	2,547.49	10,926.30	9,248.94	.....	1,677.36	1916-17
454.11	218.00	544.46	8,283.07	10,124.95	1,841.88	.....	1918-19
527.51	130.30	.....	7,083.20	7,816.00	732.80	.....	.....
2,799.82	3,616.20	4,031.74	96,588.66	91,270.11	.....	5,318.55	1921-22
1,191.00	563.10	1,491.13	21,039.18	21,095.68	56.50	.....	1919-20
445.49	72.50	.....	4,551.74	5,541.64	989.90	.....	.....
1,771.00	460.30	2,583.27	25,498.07	24,195.54	.....	1,302.53	1918-19
163.20	44.80	191.69	2,322.20	2,464.45	142.25	.....	1916-17
2,712.96	4,458.40	3,906.66	113,884.47	107,621.52	.....	6,262.95	1921-22
661.49	428.90	679.25	13,301.21	15,438.81	2,137.60	.....	1919-20

NIAGARA

Statement Showing the Amount to be Paid by Each Municipality as the Cost—under Received by the Commission from Each Municipality on Account of such Cost, upon Ascertainment (by Annual Adjustment) of the Actual Cost

Municipality	Interim Rates per Horsepower collected by Commission during year		Share of Capital Cost of system on which interest and fixed charges are payable	Horse-power supplied in year after correction for power factor	Cost of Power to Commission	Share of Operating	
	To Dec. 31, 1921	To Oct. 31, 1922				Operating Maintenance and Administrative Expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
Hamilton.....	16.00	20.00	1,506,231.82	18,832.2	315,930.06	36,820.71	33,801.00
Harriston.....	55.00	50.00	52,313.23	191.2	3,207.58	2,676.82	2,241.37
Hensall.....	57.00	64.00	24,157.00	54.7	917.65	831.05	1,033.42
Hespeler.....	23.00	29.00	37,494.33	447.7	7,510.64	2,486.67	1,476.07
Highgate.....	55.00	55.00	14,204.31	42.8	718.01	575.95	586.98
Ingersoll.....	23.00	29.00	101,737.64	1,197.8	20,094.36	7,291.28	4,097.92
Kitchener.....	20.00	25.00	517,005.12	7,312.0	122,666.53	28,416.88	20,437.38
Lambeth.....	75.00	75.00	11,024.12	30.9	518.38	689.83	469.78
Listowel.....	37.00	37.00	74,520.49	412.8	6,925.16	3,418.69	3,148.33
London.....	20.00	25.00	1,079,944.93	15,137.0	253,939.18	46,602.54	40,028.28
London Railway Commission...	15.00+ kw-hr	15.00+ kw-hr	138,090.46	1,025.8	17,208.88	15,914.89	5,751.71
Lucan.....	35.00	38.00	30,293.63	178.5	2,994.53	1,566.66	1,244.62
Lynden.....	50.00	50.00	24,206.53	96.8	1,623.92	963.34	1,034.45
Markham.....	77.74	70.00	18,974.76	77.4	1,919.59	163.80	834.90
Milton.....	28.00	32.00	103,995.01	894.4	15,004.51	4,896.10	4,058.19
Milverton.....	35.00	35.00	52,123.10	351.5	5,896.79	2,811.16	2,182.34
Mimico.....	21.00	26.00	58,465.72	595.1	9,983.43	2,558.77	2,341.02
Mitchell.....	36.00	37.00	33,708.58	224.2	3,761.19	1,883.02	1,412.33
Moorefield.....	70.00	70.00	14,060.06	30.7	515.03	981.71	608.90
Mount Brydges.	70.00	76.00	9,739.76	27.3	457.98	486.71	415.07
Newbury.....	67.10	67.10	9,378.28	24.5	411.01	431.64	398.56
New Hamburg..	32.00	38.00	35,102.77	245.1	4,111.81	2,301.17	1,467.05
New Toronto..	22.00	26.00	171,347.96	1,803.9	30,262.33	7,603.66	6,837.73
Niagara Falls..	12.50	17.50	39,269.58	4,050.9	67,958.13	4,228.74	1,736.09
Niagara-on-Lake	28.00	26.00	7,998.19	185.7	3,115.31	975.68	352.29
Norwich.....	35.00	39.00	38,139.16	248.7	4,172.21	2,485.33	1,599.54
Oil Springs....	43.00	48.00	39,503.84	212.6	3,566.59	2,159.21	1,509.58
Otterville.....	50.00	52.00	10,173.58	40.4	677.75	639.61	434.86
Palmerston....	45.00	45.00	40,943.24	197.2	3,308.24	2,134.33	1,739.21
Paris.....	21.00	26.00	65,850.42	897.6	15,058.19	3,261.13	2,613.39
Parkhill.....	75.00	75.00	34,399.18	61.9	1,038.44	1,042.42	1,482.90
Petrolia.....	36.00	36.00	93,825.09	611.0	10,250.17	4,266.31	3,730.76
Plattsville....	65.00	75.00	15,561.28	28.9	484.83	855.93	675.57
Port Credit....	23.00	28.00	21,430.11	143.2	2,402.33	1,457.43	889.77
Port Dover....	62.00	62.00	20,483.53	58.1	974.69	1,283.09	821.72
Port Stanley...	53.00	50.00	42,727.88	207.0	3,472.64	2,774.10	1,814.57
Preston.....	22.00	27.00	128,079.07	1,808.1	30,332.79	7,091.13	4,934.01
Princeton.....	90.00	90.00	9,294.16	18.5	310.36	443.40	403.13
Queenston.....	18.42	18.42	800.07	36.6	614.00	93.58	35.28
Ridgetown.....	45.00	45.00	40,667.08	205.2	3,442.45	2,104.03	1,671.37
Rockwood.....	55.00	65.00	14,590.85	50.7	850.55	584.91	617.68
Rodney.....	55.00	55.00	15,981.58	67.8	1,137.42	1,027.93	639.13
St. George.....	45.00	49.00	6,471.84	72.9	1,222.97	720.51	261.72
St. Jacobs.....	35.00	40.00	10,143.36	66.2	1,110.58	575.67	425.39
St. Marys.....	32.00	35.00	106,761.28	892.8	14,977.66	7,048.58	4,415.38

SYSTEM—Continued

Section 23 of the Act—of Power Supplied to it by the Commission, the Amount and the Amount Remaining to be Credited or Charged to Each Municipality of Power Supplied to it in the Year Ending 31st October, 1922

Costs and Fixed Charges.			Total Cost of Power for year as provided to be paid under Section 23 of Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual Cost of Power by annual adjustment		Sinking Fund for the years mentioned hereunder charged as part of the Cost of Power in the year 1921-1922
Renewals	Contingencies	Sinking Fund			Credited	Charged	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
8,428.00	18,832.20	12,136.32	425,948.29	372,310.10	.....	53,638.19	1921-22
624.83	191.20	740.56	9,682.36	9,738.10	55.74	.....	1916-17
290.17	54.70	810.46	3,937.45	3,425.88	.....	511.57	1916-17
391.41	447.70	563.64	12,876.13	12,816.83	.....	59.30	1921-22
164.09	42.80	226.10	2,313.93	2,356.61	42.68	.....	1916-17
1,089.48	1,197.80	1,568.85	35,339.69	35,594.11	254.42	.....	1921-22
5,350.03	7,312.00	7,704.05	191,886.87	179,509.95	.....	12,376.92	1921-22
131.53	30.90	144.45	1,984.87	2,991.85	1,006.98	.....	1917-18
868.67	412.80	834.97	15,608.62	15,272.68	.....	335.94	1916-17
10,427.58	15,137.00	15,015.76	381,150.34	366,059.43	.....	15,090.91	1921-22
1,570.03	1,025.80	2,456.76	43,928.07	35,661.90	.....	8,266.17	1918-19
342.45	178.50	460.53	6,787.29	6,683.08	.....	104.21	1917-18
287.84	96.80	445.54	4,451.89	4,840.28	388.39	.....	1917-18
237.19	77.40	.....	3,232.88	5,521.82	2,288.94	.....	.....
1,097.11	894.40	1,383.33	27,333.64	28,039.06	705.42	.....	1919-20
598.06	351.50	488.46	12,328.31	12,303.48	.....	24.83	1916-17
627.95	595.10	531.99	16,638.26	14,982.41	.....	1,655.85	1920-21
387.25	224.20	557.64	8,225.63	8,258.79	33.16	.....	1921-22
171.07	30.70	.....	2,307.41	2,146.12	.....	161.29	.....
116.21	27.30	227.10	1,730.37	1,934.45	204.08	.....	1917-18
111.70	24.50	.....	1,377.41	1,645.60	268.19	.....	.....
401.49	245.10	578.14	9,104.76	9,076.29	.....	28.47	1921-22
1,830.03	1,803.90	4,420.29	52,757.94	45,925.60	.....	6,832.34	1918-19
493.21	4,050.90	378.19	78,845.26	67,395.34	.....	11,449.92	1917-18
100.08	185.70	.....	4,729.06	4,883.47	154.41	.....	.....
438.90	248.70	658.59	9,603.27	9,498.77	.....	104.50	1920-21
415.60	212.60	.....	7,863.58	10,043.76	2,180.18	.....	.....
121.02	40.40	60.47	1,974.11	2,012.60	38.49	.....	1916-17
481.79	197.20	678.88	8,539.65	8,875.12	335.47	.....	1916-17
686.46	897.60	774.88	23,291.65	22,677.07	.....	614.58	1918-19
417.42	61.90	.....	4,043.08	4,639.99	596.91	.....	.....
1,021.77	611.00	1,536.71	21,416.72	21,997.20	580.48	.....	1916-17
190.12	28.90	411.98	2,647.33	2,114.95	.....	532.38	1918-19
243.84	143.20	198.31	5,334.88	4,362.28	.....	972.60	1920-21
229.82	58.10	.....	3,367.42	3,600.62	233.20	.....	.....
502.59	207.00	728.98	9,499.88	10,349.14	849.26	.....	1920-21
1,288.94	1,808.10	1,856.07	47,311.04	47,465.11	154.07	.....	1921-22
113.37	18.50	147.02	1,435.78	1,693.50	257.72	.....	1918-19
10.02	36.60	.....	789.48	673.82	.....	115.66	.....
462.02	205.20	720.14	8,605.21	9,232.76	627.55	.....	1917-18
172.32	50.70	224.65	2,500.81	3,026.77	525.96	.....	1919-20
177.34	67.80	.....	3,049.62	3,437.79	388.17	.....	.....
69.80	72.90	233.24	2,581.14	3,153.27	572.13	.....	1917-18
116.72	66.20	.....	2,294.56	2,558.48	263.92	.....	.....
1,198.67	892.80	1,726.09	30,259.18	30,775.28	516.10	.....	1921-22

NIAGARA

Statement Showing the Amount to be Paid by Each Municipality as the Cost—under Received by the Commission from Each Municipality on Account of such Cost, upon Ascertainment (by Annual Adjustment) of the Actual Cost

Municipality	Interim Rates per Horsepower collected by Commission during year		Share of Capital Cost of system on which interest and fixed charges are payable	Horsepower supplied in year after correction for power factor	Cost of Power to Commission	Share of Operating	
	To Dec. 31, 1921	To Oct. 31, 1922				Operating Maintenance and Administrative Expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
St. Thomas...	25.00	30.00	239,026.38	2,742.8	46,013.37	15,095.35	9,650.06
Sarnia.....	35.00	35.00	501,993.95	3,297.9	55,325.76	22,457.89	19,941.89
Scarboro Twp.	28.00	35.00	17,598.46	295.3	7,323.71	685.03	774.32
Seaforth.....	36.00	40.00	63,449.95	339.7	5,698.83	2,967.06	2,684.44
Simcoe.....	28.00	34.00	38,816.64	348.4	5,844.78	2,228.33	1,600.14
Springfield...	65.00	65.00	8,999.28	18.6	312.03	594.71	390.10
Stamford Twp.	16.00	20.00	9,747.62	473.3	7,940.11	829.37	429.87
Stratford.....	27.00	30.00	289,592.57	2,955.9	49,588.35	16,483.89	11,807.97
Strathroy.....	37.00	40.00	84,136.77	453.7	7,611.30	3,280.19	3,477.49
Streetsville...	12.00+	12.00+	42,821.69	272.9	4,578.18	2,640.17	1,726.22
	kw-hr	kw-hr					
Tavistock....	35.00	37.00	47,760.33	275.3	4,618.45	2,184.43	2,014.46
Thamesford...	50.00	54.00	22,315.14	99.6	1,670.90	1,119.53	931.58
Thamesville...	55.00	55.00	16,984.29	79.1	1,326.97	1,045.47	701.81
Theford.....		110.77	20,144.17	15.2	255.00	623.48	493.68
Thorndale....	60.00	70.00	15,940.62	47.8	801.90	991.01	682.85
Tilbury.....	50.00	50.00	33,916.41	186.6	3,130.41	1,665.62	1,370.58
Tillsonburg...	30.00	39.00	61,993.86	364.3	6,111.52	3,876.02	2,612.58
Toronto.....	17.00	22.00	4,519,247.27	73,676.9	1,236,007.88	117,443.16	167,855.19
Toronto Twp..	25.00	30.00	25,426.17	288.8	4,844.93	1,724.29	1,011.55
Walkerville...	35.00	35.00	625,776.06	4,401.9	73,846.53	24,308.41	25,265.78
Wallaceburg..	35.00	35.00	124,703.74	787.1	13,204.44	4,895.26	4,901.60
Wardsville...	82.20	82.20	6,832.59	11.3	189.57	393.92	294.15
Waterdown...	31.00	36.00	18,960.08	137.5	2,306.71	1,041.23	790.75
Waterford...	33.00	38.00	21,067.73	171.2	2,872.06	1,198.11	873.53
Waterloo.....	21.00	26.00	107,984.45	1,468.0	24,627.25	6,489.33	4,287.35
Watford.....	85.00	85.00	31,616.87	68.1	1,142.45	1,699.24	1,298.73
Welland.....	16.00	20.00	89,950.29	1,711.5	28,712.22	2,964.79	3,945.29
Wellesley.....	39.00	43.00	29,715.82	132.4	2,221.15	1,423.51	1,264.89
West Lorne...	50.00	45.00	32,393.34	176.5	2,960.97	2,099.13	1,259.02
Weston.....	23.00	29.00	112,203.64	1,195.4	20,054.10	5,796.81	4,493.18
Windsor.....	35.00	35.00	1,011,472.81	7,166.3	120,222.16	38,264.31	40,811.89
Woodbridge...	31.00	37.00	28,171.72	180.6	3,029.76	1,514.63	1,172.52
Woodstock...	21.00	27.00	139,769.50	2,142.5	35,942.70	9,474.44	5,472.77
Wyoming.....	60.00	60.00	12,729.42	38.7	649.23	712.43	534.92
Zurich.....	60.00	74.00	26,682.21	51.2	858.94	1,071.75	1,146.40

SYSTEM—Continued

Section 23 of the Act—of Power Supplied to it by the Commission, the Amount and the Amount Remaining to be Credited or Charged to Each Municipality of Power Supplied to it in the Year Ending 31st October, 1922

Costs and Fixed Charges			Total Cost of Power for year as provided to be paid under Section 23 of Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual Cost of Power by annual adjustment		Sinking Fund for the years mentioned hereunder charged as part of the Cost of Power in the year 1921-1922
Renewals	Contingencies	Sinking Fund			Credited	Charged	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
2,570.43	2,742.80	3,701.42	79,773.43	80,555.44	782.01	.....	1921-22
5,459.62	3,297.90	5,786.99	112,270.05	115,426.46	3,156.41	.....	1916-17
219.98	295.30	.....	9,298.34	9,983.85	685.51	.....	.....
741.44	339.70	1,067.67	13,499.14	13,302.15	.....	196.99	1921-22
432.85	348.40	306.03	10,760.53	11,495.35	734.82	.....	1917-18
109.66	18.60	.....	1,425.10	1,617.38	192.28	.....	.....
122.12	473.30	64.41	9,859.18	9,619.97	.....	239.21	1916-17
3,170.17	2,955.90	4,565.04	83,571.32	87,261.80	.....	1,309.52	1921-22
959.62	453.70	1,262.45	17,044.75	17,400.22	355.47	.....	1918-19
473.39	272.90	681.66	10,372.52	10,817.88	445.36	.....	1921-22
555.12	275.30	430.06	10,077.82	10,083.97	6.15	.....	1916-17
258.44	99.60	383.99	4,464.04	5,326.68	862.64	.....	1918-19
194.44	79.10	292.90	3,640.69	4,351.37	710.68	.....	1917-18
139.30	15.20	.....	1,526.66	1,679.07	152.41	.....	.....
191.00	47.80	321.19	3,035.75	3,228.05	192.30	.....	1918-19
377.73	186.60	494.19	7,225.13	9,331.86	2,106.73	.....	1917-18
719.49	364.30	1,036.06	14,719.97	13,618.10	.....	1,101.87	1921-22
43,090.98	73,676.90	62,051.00	1,700,125.11	1,557,278.85	.....	142,846.26	1921-22
269.36	288.80	288.31	8,427.24	8,445.53	18.29	.....	1919-20
6,903.28	4,401.90	8,816.56	143,542.46	156,358.66	12,816.20	.....	1918-19
1,343.41	787.10	2,056.52	27,188.33	27,547.30	358.97	.....	1917-18
82.86	11.30	.....	976.80	930.21	.....	46.59	.....
216.07	137.50	311.14	4,803.40	4,853.67	50.27	.....	1921-22
237.49	171.20	423.05	5,775.44	6,350.21	574.77	.....	1917-18
1,126.44	1,468.00	1,622.07	39,620.44	37,445.94	.....	2,174.50	1921-22
364.71	68.10	.....	4,573.23	5,785.64	1,212.41	.....	.....
1,120.82	1,711.50	.....	38,454.62	33,322.26	.....	5,132.35	.....
351.09	132.40	399.82	5,792.86	5,598.98	.....	193.88	1916-17
346.67	176.50	161.56	7,003.85	8,085.76	1,081.91	.....	1916-17
1,201.92	1,195.40	1,730.76	34,472.17	33,677.23	.....	794.94	1921-22
11,147.34	7,166.30	8,783.54	226,395.54	251,253.35	24,857.81	.....	1918-19
321.84	180.60	408.11	6,627.46	6,483.88	.....	143.58	1918-19
1,421.14	2,142.50	2,046.44	56,499.99	55,768.92	.....	731.07	1921-22
149.55	38.70	321.80	2,406.63	2,321.00	.....	85.63	1916-17
322.49	51.20	.....	3,450.78	3,652.75	201.97	.....	.....

NIAGARA

Statement Showing the Amount to be Paid by Each Municipality as the Cost—under Received by the Commission from Each Municipality on Account of such Cost, upon Ascertainment (by Annual Adjustment) of the Actual Cost

Municipality	Share of Capital Cost of system on which interest and fixed charges are payable	Horse-power supplied in year after correction for power factor	Cost of Power to Commission	Share of Operating	
				Operating Maintenance and Administrative Expenses	Interest
	\$ c.		\$ c.	\$ c.	\$ c.
Aylmer rural power district...	6,218.61	6.7	112.40	316.27	269.03
Baden rural power district....	10,629.67	19.9	333.84	870.20	460.28
Brant rural power district....	8,914.26	3.2	53.68	64.46	179.15
Chatham rural power district..	23,592.83	26.0	436.18	503.90	560.51
Dorchester rural power district	45,424.51	42.1	706.27	1,604.80	1,006.44
Drumbo rural power district...	9,787.62	3.2	53.69	62.57	154.15
Dundas rural power district...	16,168.88	5.4	90.59	523.17	569.03
Galt rural power district.....	1,963.50	.5	8.39	1.99	12.07
Ingersoll rural power district..	495.90	.....	.....	14.52	21.82
Jordan rural power district....	2,103.45	1.8	41.47	29.36	41.78
Lynden rural power district...	8,449.72	6.6	110.72	140.35	269.97
Niagara rural power district...	8,102.12	15.0	251.64	300.48	282.80
Preston rural power district...	37,952.16	99.5	1,669.22	1,730.34	1,589.10
Ridgetown rural power district	27,938.48	14.1	236.54	410.52	403.53
Saltfleet rural power district...	100,321.46	69.1	1,159.23	4,188.49	2,232.52
Sandwich rural power district..	4,421.54	5.8	97.30	77.36	69.01
Stamford rural power district...	10,164.85	10.2	171.12	296.29	290.99
Welland rural power district...	3,533.32	3.6	60.40	118.48	88.62
Woodstock rural power district	1,536.69	.....	.....	448.16	67.61
Municipalities supplied directly from Ontario Power Co.			Cost of power at points of delivery to Commission		
Merritton.....	.....	217.3	4,468.31	98.53	.....
Port Colborne.....	.....	473.4	11,234.21	225.35	.....
St. Catharines.....	19,383.54	4,222.1	83,563.79	412.43	1,036.78
Chippawa Village.....	.....	81.0	1,955.46	196.92	26.83
Chippawa Rural Power District	17,378.88	3.2	74.04	54.98	253.35
Welland (Pt. Robinson).....	31,309.14	257.8	5,156.00	.....	1,565.32
Grantham Township.....	28,289.47	39.0	948.19	51.25	1,414.46
Port Dalhousie.....	5,834.33	162.9	3,960.53	284.42	233.37
Totals—Municipalities.....	16,543,465.04	195,668.0	3,305,358.26	665,019.93	617,923.93
Totals—Companies.....	2,621,743.63	32,239.6	543,139.34	100,755.30	108,183.68
Grand Totals.....	19,165,208.67	227,907.6	3,848,497.60	765,775.23	726,107.61
Non-Operating Capital.....	2,010,551.99				
“ “ “ R.P.D.	235,678.97				
	21,411,439.63				

SYSTEM—Continued

Section 23 of the Act—of Power Supplied to it by the Commission, the Amount and the Amount Remaining to be Credited or Charged to Each Municipality of Power Supplied to it in the Year Ending 31st October, 1922

Costs and Fixed Charges.			Total Cost of Power for year as provided to be paid under Section 23 of Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual Cost of Power by annual adjustment		Sinking Fund for the years mentioned hereunder charged as part of the Cost of Power in the year 1921-1922
Renewals	Contingencies	Sinking Fund			Credited	Charged	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
132.23	6.70	109.45	946.08	369.07	.....	577.01	1921-22
276.33	19.90	186.51	2,147.06	1,758.54	.....	388.52	1921-22
131.05	3.20	73.00	504.54	970.89	466.35	.....	1921-22
357.86	26.00	226.97	2,111.42	2,984.52	873.10	.....	1921-22
570.99	42.10	407.94	4,338.54	7,887.50	3,548.96	.....	1921-22
85.16	3.20	62.77	421.54	564.84	143.30	.....	1921-22
453.89	5.40	232.30	1,874.38	2,771.97	897.59	.....	1921-22
6.61	.50	4.89	34.45	91.16	56.71	.....	1921-22
16.34	.....	8.92	61.60	73.60	12.00	.....	1921-22
23.26	1.80	17.09	154.76	308.31	153.55	.....	1921-22
110.28	6.60	109.85	747.77	1,036.33	288.56	.....	1921-22
207.72	15.00	115.69	1,173.33	1,763.61	590.28	.....	1921-22
942.17	99.50	641.15	6,671.48	11,434.79	4,763.31	.....	1921-22
232.78	14.10	163.82	1,461.29	3,610.68	2,149.39	.....	1921-22
1,458.07	69.10	907.09	10,014.50	13,517.96	3,503.46	.....	1921-22
35.43	5.80	27.72	312.62	804.39	491.77	.....	1921-22
176.15	10.20	119.04	1,063.79	1,627.90	564.11	.....	1921-22
45.29	3.60	36.25	352.64	537.59	184.95	.....	1921-22
58.99	.....	27.66	602.42	594.10	.....	8.32	1921-22
.....	.....	64.99	4,631.83	3,910.95	.....	720.88	.....
.....	.....	446.63	11,906.19	11,502.06	.....	404.13	.....
.....	.....	1,367.02	86,380.02	75,659.08	.....	10,720.94	.....
1.30	.....	64.22	2,244.73	2,591.44	346.71	.....	.....
184.48	3.20	104.31	674.36	1,139.09	464.73	.....	.....
.....	.....	563.51	7,284.83	6,524.79	.....	760.04	.....
.....	39.00	509.22	2,962.12	2,637.32	.....	324.80	.....
72.93	162.90	105.02	4,819.17	4,104.98	.....	714.19	.....
166,006.69	190,416.40	211,587.56	5,156,312.77	4,959,172.76	110,117.72	307,257.73	
29,248.83	31,275.20	42,555.81	855,158.16	698,569.58	4,862.29	161,450.87	
195,255.52	221,691.60	254,143.37	6,011,470.93	5,657,742.34	114,980.01	468,708.60	

NIAGARA SYSTEM

Reserve for Contingencies Account, 31st October, 1922

Balance brought forward 31st October, 1921.....		\$24,875.01
Added during the year ending 31st October, 1922:		
Amounts charged to Municipalities as part of the Cost of Power delivered to them.....	\$190,416.40	
Provision against equipment employed in respect of contracts with Sundry Customers.....	31,275.20	
Interest at 4% per annum on monthly balances at the credit of the account.....	995.00	
		<u>222,686.60</u>
		\$247,561.61
Deduct:		
Expenditures to cover contingencies met with during the year ending 31st October, 1921.....	\$86,119.16	
Net loss for year on power sold to Sundry Power Customers.....	156,588.58	
		<u>242,707.74</u>
Balance carried forward 31st October, 1922.....		<u><u>\$4,853.87</u></u>

NIAGARA SYSTEM

Reserve for Renewals Account, 31st October, 1922

Total provision for Renewals to 31st October, 1921.....		\$2,389,794.33
“ provision for Renewals to 31st October, 1921—Rural Lines...		7,036.07
		<hr/> \$2,396,830.40
Deduct:		
Expenditures to 31st October, 1921.....	\$167,428.43	
Expenditures to 31st October, 1921—Rural.....	679.70	
Reduction of Renewals Reserve upon adjustment of Dunnville Capital.....	897.58	
		<hr/> 169,005.71
		<hr/> \$2,227,824.69
Added during the year ending 31st October, 1921:		
Amount charged to Municipalities as part of the Cost of Power delivered to them.....	\$166,006.69	
Provision against equipment employed in respect of contracts with Sundry Companies.....	29,248.83	
Interest at 4% per annum on the monthly balances to the credit of the account.....	89,112.99	
Renewals Reserve provided on second-hand equipment purchased.....	4.70	
		<hr/> 284,373.21
		<hr/> \$2,512,197.90
Expenditures during the year ending 31st October, 1922.....		36,776.88
		<hr/> \$2,475,421.02
Balance carried forward 31st October, 1922.....		<hr/> <hr/>

NIAGARA

Statement Showing the Total Sinking Fund Requirements to be Met by each Municipality under Section 23 of the Act.—Sinking Fund Payments made the total of such Sinking Fund Payments, including

Municipality	Total Sinking Fund requirements chargeable to the municipality under the Act		Sinking Fund requirements the payment of which has been deferred	
	(a) For period of	(b) Amount	(a) For period of	(b) Amount
		\$ c.		\$ c.
Acton.....	6 years ending 31 Oct. 1922	2,840.60	1 years ending 31 Oct. 1922	588.57
Ailsa Craig....	6 " " " 1922	3,185.18	4 " " " 1922	2,382.56
Alvinston.....	1 " " " 1922	400.12	1 " " " 1922	400.12
Aylmer.....	5 " " " 1922	4,286.87	5 " " " 1922	4,286.87
Ayr.....	6 " " " 1922	1,497.05	3 " " " 1922	819.64
Baden.....	6 " " " 1922	2,885.35	1 " " " 1922	458.12
Beachville....	6 " " " 1922	3,009.17	1 " " " 1922	506.77
Blenheim.....	6 " " " 1922	4,030.35	4 " " " 1922	2,717.70
Bolton.....	6 " " " 1922	4,192.61	4 " " " 1922	2,782.67
Bothwell.....	6 " " " 1922	4,063.85	4 " " " 1922	2,788.60
Brampton.....	6 " " " 1922	7,155.28		
Brantford.....	6 " " " 1922	22,667.59	3 years ending 31 Oct. 1922	13,722.80
Brigden.....	5 " " " 1922	2,624.43	5 " " " 1922	2,624.43
Burford.....	6 " " " 1922	1,870.85	4 " " " 1922	1,303.17
Burgessville...	6 " " " 1922	657.89	5 " " " 1922	593.11
Caledonia.....	6 " " " 1922	707.75	1 " " " 1922	132.57
Chatham.....	6 " " " 1922	23,230.65	4 " " " 1922	16,595.94
Chippawa V.	(See end of this table)			
Clinton.....	6 " " " 1922	4,234.63	3 " " " 1922	2,319.40
Comber.....	6 " " " 1922	2,566.50	4 " " " 1922	1,894.16
Dashwood.....	6 " " " 1922	2,082.83	6 " " " 1922	2,082.83
Delaware.....	6 " " " 1922	457.53	4 " " " 1922	314.47
Dereham T....	4 " " " 1922	569.08	4 " " " 1922	569.08
Dorchester....	6 " " " 1922	478.54	3 " " " 1922	250.50
Drayton.....	5 " " " 1922	2,339.11	5 " " " 1922	2,339.11
Dresden.....	6 " " " 1922	2,887.43	4 " " " 1922	2,104.87
Drumbo.....	6 " " " 1922	561.75	3 " " " 1922	250.40
Dublin.....	6 " " " 1922	946.29	6 " " " 1922	946.29
Dundas.....	6 " " " 1922	5,341.63		
Dunnville....	5 " " " 1922	7,218.29	5 years ending 31 Oct. 1922	7,218.29
Dutton.....	6 " " " 1922	1,986.41	4 " " " 1922	1,388.31
Elmira.....	6 " " " 1922	4,209.17	2 " " " 1922	1,744.12
Elora.....	6 " " " 1922	4,125.55	3 " " " 1922	2,071.15
Embro.....	6 " " " 1922	1,950.78	3 " " " 1922	982.38
Etobicoke T...	6 " " " 1922	2,101.48	6 " " " 1922	2,101.48
Exeter.....	6 " " " 1922	6,593.47	5 " " " 1922	4,045.98
Fergus.....	6 " " " 1922	3,470.60	3 " " " 1922	1,874.90
Forest.....	6 " " " 1922	4,844.97	6 " " " 1922	4,844.97
Galt.....	6 " " " 1922	21,826.39		
Georgetown...	6 " " " 1922	8,981.98	2 years ending 31 Oct. 1922	3,480.60
Glencoe.....	3 " " " 1922	1,445.12	3 " " " 1922	1,445.12
Goderich.....	6 " " " 1922	14,384.20	3 " " " 1922	7,767.41
Granton.....	6 " " " 1922	1,380.50	5 " " " 1922	1,188.81
Guelph.....	6 " " " 1922	20,343.28		
Hagersville...	6 " " " 1922	4,185.43	2 years ending 31 Oct. 1922	1,832.99

SYSTEM

cipality, Sinking Fund Requirements, the Payment of which has been Deferred by by Certain Municipalities which have been Operating more than Five Years, and Interest allowed thereon, to 31st October, 1922

Sinking Fund requirements paid (or charged) as part of the cost of power		Interest at 4% per annum allowed on Sinking Fund requirements which have been paid	Sinking Fund paid by each municipality as part of the cost of power supplied by Ontario Power Co.	Total Sinking Fund payments and accumulated interest to the credit of the municipality on 31st October, 1922
(a) For period of	(b) Amount			
	\$ c.	\$ c.	\$ c.	\$ c.
5 years ending 31 Oct. 1921	2,252.03	177.77	613.74	3,043.54
2 " " " 1918	802.62	12.90	353.44	1,168.96
.....	.....	.....	26.58	26.58
3 years ending 31 Oct. 1919	677.41	26.42	517.59	517.59
.....	.....	.....	205.18	909.01
5 " " " 1921	2,427.23	249.06	554.82	3,231.11
5 " " " 1921	2,502.40	192.50	755.49	3,450.39
2 " " " 1918	1,312.65	27.11	437.34	1,777.10
2 " " " 1918	1,409.94	28.46	323.52	1,761.92
2 " " " 1918	1,275.25	25.15	384.29	1,684.69
6 " " " 1922	7,155.28	716.42	2,678.26	10,549.96
3 " " " 1919	8,944.79	338.23	12,623.89	21,906.91
.....	.....	.....	203.42	203.42
2 years ending 31 Oct. 1918	567.68	11.35	130.06	709.09
1 " " " 1917	64.78	.....	72.59	137.37
5 " " " 1921	575.18	45.65	245.24	866.07
2 " " " 1918	6,634.71	120.89	6,536.88	13,292.48
.....	.....	.....	176.51	176.51
3 years ending 31 Oct. 1919	1,915.23	.....	487.28	2,475.36
2 " " " 1918	672.34	14.72	269.40	956.46
.....	.....	.....	138.31	138.31
2 years ending 31 Oct. 1918	143.06	2.93	34.01	180.00
.....	.....	.....	175.47	175.47
3 years ending 31 Oct. 1919	228.04	8.74	70.36	307.14
.....	.....	.....	146.63	146.63
2 years ending 31 Oct. 1918	782.56	14.67	519.95	1,317.18
3 " " " 1919	311.35	14.67	67.70	393.45
.....	.....	.....	79.15	79.15
6 years ending 31 Oct. 1922	5,341.63	603.59	3,414.66	9,359.88
.....	.....	.....	749.44	749.44
2 years ending 31 Oct. 1918	598.10	11.52	307.11	916.73
4 " " " 1920	2,465.05	147.83	898.15	3,511.03
3 " " " 1919	2,054.40	77.36	619.39	2,751.15
3 " " " 1919	968.40	40.46	134.13	1,142.99
.....	.....	.....	1,106.42	1,106.42
1 year ending 31 Oct. 1917	2,547.49	.....	522.39	3,069.88
3 " " " 1919	1,595.70	64.52	534.83	2,195.05
.....	.....	.....	347.98	347.98
6 years ending 31 Oct. 1922	21,826.39	2,191.36	8,508.20	32,525.95
4 " " " 1920	5,501.38	324.26	1,515.35	7,340.99
.....	.....	.....	155.21	155.21
3 years ending 31 Oct. 1919	6,616.79	240.17	1,287.00	8,143.96
1 " " " 1917	191.69	.....	126.99	318.68
6 " " " 1922	20,343.28	2,004.26	11,238.67	33,586.21
4 " " " 1920	2,352.44	131.39	976.71	3,460.54

NIAGARA

Statement showing the Total Sinking Fund Requirements to be Met by each Municipality the Commission under Section 23 of the Act.—Sinking Fund Payments made the total of such Sinking Fund Payments, including

Municipality	Total Sinking Fund requirements chargeable to the municipality under the Act		Sinking Fund requirements the payment of which has been deferred	
	(a) For period of	(b) Amount	(a) For period of	(b) Amount
		\$ c.		\$ c.
Hamilton....	6 years ending 31 Oct. 1922	59,995.02		
Harriston....	6 " " " 1922	5,216.62	5 years ending 31 Oct. 1922	4,476.06
Hensall....	6 " " " 1922	3,131.50	5 " " " 1922	2,321.04
Hespeler....	6 " " " 1922	3,381.48		
Highgate....	6 " " " 1922	1,816.38	5 years ending 31 Oct. 1922	1,590.28
Ingersoll....	6 " " " 1922	8,951.45		
Kitchener....	6 " " " 1922	38,816.54		
Lambeth....	6 " " " 1922	971.22	4 years ending 31 Oct. 1922	671.27
Listowel....	6 " " " 1922	7,185.57	5 " " " 1922	6,350.60
London....	6 " " " 1922	77,921.91		
London Ry. C.	6 " " " 1922	15,259.48	3 years ending 31 Oct. 1922	7,503.77
Lucan....	6 " " " 1922	2,884.02	4 " " " 1922	1,990.31
Lynden....	6 " " " 1922	2,640.65	4 " " " 1922	1,746.14
Markham....	3 " " " 1922	901.06	3 " " " 1922	901.06
Milton....	6 " " " 1922	7,200.60	2 " " " 1922	2,952.53
Milverton....	6 " " " 1922	4,584.10	5 " " " 1922	4,095.64
Mimico....	6 " " " 1922	2,685.80	1 " " " 1922	904.24
Mitchell....	6 " " " 1922	3,167.30		
Moorefield....	5 " " " 1922	1,178.51	5 years ending 31 Oct. 1922	1,178.51
Mt. Brydges..	6 " " " 1922	1,202.07	4 " " " 1922	760.25
Newbury....	2 " " " 1922	247.89	2 " " " 1922	247.89
New Hamburg	6 " " " 1922	3,358.27		
New Toronto..	6 " " " 1922	22,328.35	3 years ending 31 Oct. 1922	12,794.87
Niagara Falls.	6 " " " 1922	2,901.58	4 " " " 1922	2,260.16
Niagara-on-L.	4 " " " 1922	481.55	4 " " " 1922	481.55
Norwich....	6 " " " 1922	3,441.80	1 " " " 1922	632.02
Oil Springs... 5	" " " " 1922	2,408.77	5 " " " 1922	2,408.77
Otterville....	6 " " " 1922	814.71	5 " " " 1922	754.24
Palmerston... 6	" " " " 1922	3,572.30	5 " " " 1922	2,893.42
Paris.....	6 " " " 1922	4,471.64	3 " " " 1922	2,675.91
Parkhill....	3 " " " 1922	1,452.93	3 " " " 1922	1,452.93
Petrolia....	6 " " " 1922	9,128.54	5 " " " 1922	7,591.83
Plattsville... 6	" " " " 1922	2,274.59	3 " " " 1922	903.16
Port Credit... 6	" " " " 1922	981.31	1 " " " 1922	351.13
Port Dover... 1	" " " " 1922	330.94	1 " " " 1922	330.94
Port Stanley.. 6	" " " " 1922	4,015.64	1 " " " 1922	723.74
Preston....	6 " " " 1922	9,997.58		
Princeton....	6 " " " 1922	975.66	3 years ending 31 Oct. 1922	463.97
Queenston... 2	" " " " 1922	21.99	2 " " " 1922	21.99
Ridgetown... 6	" " " " 1922	4,216.78	4 " " " 1922	2,766.02
Rockwood.... 6	" " " " 1922	1,348.19	2 " " " 1922	518.70
Rodney....	6 " " " 1922	1,623.24	6 " " " 1922	1,623.24
St. George.... 6	" " " " 1922	1,429.76	4 " " " 1922	981.18
St. Jacobs.... 6	" " " " 1922	1,047.85	6 " " " 1922	1,047.85
St. Marys.... 6	" " " " 1922	8,688.93		

SYSTEM—Continued

city, Sinking Fund Requirements, the Payment of which has been Deferred by by Certain Municipalities which have been Operating more than Five Years, and Interest allowed thereon, to 31st October, 1922

Sinking Fund requirements paid (or charged) as part of the cost of power		Interest at 4% per annum allowed on Sinking Fund requirements which have been paid	Sinking Fund paid by each municipality as part of the cost of power supplied by Ontario Power Co.	Total Sinking Fund payments and accumulated interest to the credit of the municipality on 31st October, 1922
(a) For period of	(b) Amount			
	\$ c.	\$ c.	\$ c.	\$ c.
6 years ending 31 Oct. 1922	59,995.02	5,473.46	50,105.52	115,574.00
1 " " " 1917	740.56		565.57	1,306.13
1 " " " 1917	810.46		168.89	979.35
6 " " " 1922	3,381.48	349.30	1,135.40	4,866.18
1 " " " 1917	226.10		132.25	358.35
6 " " " 1922	8,951.45	915.38	3,067.03	12,933.86
6 " " " 1922	38,816.54	3,685.99	18,716.20	61,218.73
2 " " " 1918	299.95	6.22	76.60	382.77
1 " " " 1917	834.97		1,249.74	2,084.71
6 " " " 1922	77,921.91	7,656.26	37,205.93	122,784.10
3 " " " 1919	7,755.71	317.91	3,167.74	11,241.36
2 " " " 1918	893.71	17.33	516.07	1,427.11
2 " " " 1918	894.51	17.33	279.04	1,191.51
			145.76	145.76
4 years ending 31 Oct. 1920	4,248.07	232.71	2,098.96	6,579.74
1 year ending 31 Oct. 1917	488.46		881.11	1,369.57
5 " " " 1921	1,781.56	123.34	1,248.50	3,153.40
6 " " " 1922	3,167.30	328.82	572.82	4,068.94
			83.35	83.35
2 years ending 31 Oct. 1918	441.82	8.59	77.47	527.88
			37.16	37.16
6 years ending 31 Oct. 1922	3,358.27	344.47	667.00	4,369.74
3 " " " 1919	9,533.48	253.52	7,680.82	17,467.82
2 " " " 1918	641.42	10.53	10,227.45	10,879.40
			475.47	475.47
5 years ending 31 Oct. 1921	2,809.78	226.45	695.59	3,731.82
			430.65	430.65
1 year ending 31 Oct. 1917	60.47		104.97	165.44
1 " " " 1917	678.88		498.40	1,177.28
3 " " " 1919	1,795.73	58.48	2,139.32	3,993.53
			131.74	131.74
1 year ending 31 Oct. 1917	1,536.71		1,616.40	3,153.11
3 " " " 1919	1,371.43	57.59	115.66	1,544.68
5 " " " 1921	630.18	42.28	334.25	1,006.71
			59.62	59.62
5 years ending 31 Oct. 1921	3,291.90	264.38	540.12	4,096.40
6 " " " 1922	9,997.58	943.82	4,560.52	15,501.92
3 " " " 1919	511.69	22.37	45.95	580.01
			58.92	58.92
2 years ending 31 Oct. 1918	1,450.76	29.22	534.63	2,014.61
4 " " " 1920	829.49	47.52	149.06	1,026.07
			176.52	176.52
2 years ending 31 Oct. 1918	448.58	8.61	207.99	665.18
			200.45	200.45
6 years ending 31 Oct. 1922	8,688.93	749.10	2,343.71	11,826.74

NIAGARA

Statement Showing the Total Sinking Fund Requirements to be Met by each Muni
the Commission under Section 23 of the Act.—Sinking Fund Payments made
the total of such Sinking Fund Payments, including

Municipality	Total Sinking Fund requirements chargeable to the municipality under the Act		Sinking Fund requirements the payment of which has been deferred	
	(a) For period of	(b) Amount	(a) For period of	(b) Amount
		\$ c.		\$ c.
St. Thomas...	6 years ending 31 Oct. 1922	22,390.85		
Sarnia.....	6 " " " 1922	44,099.51	5 years ending 31 Oct. 1922	38,312.52
Scarboro T....	3 " " " 1922	798.43	3 " " " 1922	798.43
Seaforth.....	6 " " " 1922	8,370.89		
Simcoe.....	6 " " " 1922	2,454.05	4 years ending 31 Oct. 1922	1,863.31
Springfield...	6 " " " 1922	999.29	6 " " " 1922	999.29
Stamford T....	6 " " " 1922	802.08	5 " " " 1922	737.67
Stratford.....	6 " " " 1922	21,172.19		
Strathroy....	6 " " " 1922	7,822.46	3 years ending 31 Oct. 1922	4,065.73
Streetsville...	3 " " " 1922	1,861.15		
Tavistock....	6 " " " 1922	4,643.52	5 years ending 31 Oct. 1922	4,213.46
Thamesford...	6 " " " 1922	2,125.82	3 " " " 1922	1,130.40
Thamesville...	6 " " " 1922	1,819.58	4 " " " 1922	1,157.41
Thedford.....	1 " " " 1922	200.59	1 " " " 1922	200.59
Thorndale....	6 " " " 1922	2,265.44	3 " " " 1922	914.41
Tilbury.....	6 " " " 1922	2,965.80	4 " " " 1922	1,957.72
Tillsonburg...	6 " " " 1922	7,686.56		
Toronto.....	6 " " " 1922	287,621.18		
Toronto Twp.	6 " " " 1922	1,751.41	2 years ending 31 Oct. 1922	788.45
Walkerville...	6 " " " 1922	62,822.17	3 " " " 1922	29,553.35
Wallaceburg..	6 " " " 1922	12,811.82	4 " " " 1922	9,027.52
Wardsville....	2 " " " 1922	155.14	2 " " " 1922	155.14
Waterdown...	6 " " " 1922	1,616.59		
Waterford....	6 " " " 1922	1,958.63	4 years ending 31 Oct. 1922	1,275.12
Waterloo.....	6 " " " 1922	8,357.05		
Watford.....	6 " " " 1922	3,478.53	6 years ending 31 Oct. 1922	3,478.53
Welland.....	6 " " " 1922	11,153.46	6 " " " 1922	11,153.46
Wellesley....	6 " " " 1922	2,965.95	5 " " " 1922	2,566.13
West Lorne...	6 " " " 1922	1,818.83	5 " " " 1922	1,657.27
Weston.....	6 " " " 1922	8,106.30		
Windsor.....	6 " " " 1922	66,862.85	3 years ending 31 Oct. 1922	39,368.49
Woodbridge..	6 " " " 1922	2,395.75	3 " " " 1922	1,341.83
Woodstock...	6 " " " 1922	10,212.73		
Wyoming....	6 " " " 1922	1,473.64	5 years ending 31 Oct. 1922	1,151.84
Zurich.....	6 " " " 1922	2,765.37	6 " " " 1922	2,765.37
S. Dorchester.	1 " " " 1921	48.19	1 " " " 1922	48.19

SYSTEM—Continued

cipality, Sinking Fund Requirements, the Payment of which has been Deferred by by Certain Municipalities which have been Operating more than Five Years, and Interest allowed thereon, to 31st October, 1922.

Sinking Fund requirements paid (or charged) as part of the cost of power		Interest at 4% per annum allowed on Sinking Fund requirements which have been paid	Sinking Fund paid by each municipality as part of the cost of power supplied by Ontario Power Co.	Total Sinking Fund payments and accumulated interest to the credit of the municipality on 31st October, 1922
(a) For period of	(b) Amount			
	\$ c.	\$ c.	\$ c.	\$ c.
6 years ending 31 Oct. 1922	22,390.85	2,351.06	7,177.13	31,919.04
1 " " " 1917	5,786.99		8,355.77	14,142.76
6 " " " 1922	8,370.89	986.79	506.58	506.58
2 " " " 1918	590.74	11.39	1,037.32	10,395.00
			744.90	1,347.03
			80.85	80.85
1 year ending 31 Oct. 1917	64.41		1,242.10	1,306.51
6 " " " 1922	21,172.19	2,032.89	6,727.98	29,933.06
3 " " " 1919	3,756.73	149.25	1,134.51	5,040.49
3 " " " 1922	1,861.15	71.64	588.34	2,521.13
1 year ending 31 Oct. 1917	430.06		780.77	1,210.83
3 " " " 1919	995.42	35.53	268.27	1,299.22
2 " " " 1918	662.17	14.77	202.15	879.09
			15.60	15.60
3 years ending 31 Oct. 1919	1,351.03	63.00	156.96	1,570.99
2 " " " 1918	1,008.08	20.56	420.01	1,448.65
6 " " " 1922	7,686.56	830.94	1,364.23	9,881.73
6 " " " 1922	287,621.18	27,440.97	180,761.15	495,823.30
4 " " " 1920	962.96	49.91	709.51	1,722.38
3 " " " 1919	33,268.82	1,551.64	10,502.80	45,323.26
2 " " " 1918	3,784.30	69.11	2,178.35	6,031.76
			14.50	14.50
6 years ending 31 Oct. 1922	1,616.59	156.93	353.62	2,127.14
2 " " " 1918	683.51	10.42	410.47	1,104.40
6 " " " 1922	8,357.05	811.37	3,783.20	12,951.62
			189.59	189.59
			6,163.41	6,163.41
1 year ending 31 Oct. 1917	399.82		357.13	756.95
1 " " " 1917	161.56		391.72	553.28
6 years ending 31 Oct. 1922	8,106.30	757.12	2,932.13	11,795.55
3 " " " 1919	27,494.36	1,184.62	14,891.89	43,570.87
3 " " " 1919	1,053.92	38.41	484.16	1,576.49
6 " " " 1922	10,212.73	982.05	5,198.64	16,393.42
1 " " " 1917	321.80		111.43	433.23
			162.02	162.02
			9.02	9.02

NIAGARA

Statement Showing the Total Sinking Fund Requirements to be Met by each Municipality under Section 23 of the Act.—Sinking Fund Payments made the total of such Sinking Fund Payments, including

Municipality	Total Sinking Fund requirements chargeable to the municipality under the Act.		Sinking Fund requirements the payment of which has been deferred	
	(a) For period of	(b) Amount	(a) For period of	(b) Amount
Rural power districts		\$ c.		\$ c.
Aylmer	6 years ending 31 Oct. 1922	397.11		
Baden	1 " " " 1922	186.51		
Brant	9 " " " 1922	148.50		
Chatham	7 " " " 1922	332.99		
Dorchester	1 " " " 1922	407.94		
Drumbo	1 " " " 1922	62.77		
Dundas	2 " " " 1922	383.74		
Galt	1 " " " 1922	4.89		
Ingersoll	9 " " " 1922	131.97		
Jordan	1 " " " 1922	17.09		
Lynden	1 " " " 1922	109.85		
Niagara	1 " " " 1922	115.69		
Preston	1 " " " 1922	641.15		
Ridgetown	1 " " " 1922	163.82		
Saltfleet	1 " " " 1922	907.09		
Sandwich	1 " " " 1922	27.72		
Stamford	1 " " " 1922	119.04		
Welland	1 " " " 1922	36.25		
Woodstock	10 " " " 1922	482.40		
Municipalities which are supplied with power directly from the Ontario Power Co.				
Merritton	2 years ending 31 Oct. 1922	124.37		
Port Colborne	2 " " " 1922	824.34		
St. Catharines	9 " " " 1922	2,550.80		
Chippawa Village	1 " " " 1922	64.22		
Chippawa R.P.D.	1 " " " 1922	104.31		
Welland (Pt. Robinson)	10 " " " 1922	4,654.36		
Grantham Township	8 " " " 1922	3,713.62		
Port Dalhousie	8 " " " 1922	845.21		
Totals—Municipalities		1,198,652.15		348,580.10
Totals—Companies (from commencement of operation.)		296,936.72		
GRAND TOTALS		1,495,588.87		348,580.10

SYSTEM—Continued

cipality, Sinking Fund Requirements, the Payment of which has been Deferred by by Certain Municipalities which have been Operating more than Five Years, and Interest allowed thereon, to 31st October, 1922.

Sinking Fund requirements paid (or charged) as part of the cost of power		Interest at 4% per annum allowed on Sinking Fund requirements which have been paid	Sinking Fund paid by each municipality as part of the cost of power supplied by Ontario Power Co.	Total Sinking Fund payments and accumulated interest to the credit of the municipality on 31st October, 1922
(a) For period of	(b) Amount			
	\$ c.	\$ c.	\$ c.	\$ c.
6 years ending 31 Oct. 1922	397.11	26.74	6.87	430.72
1 " " " 1922	186.51	.....	20.42	206.93
9 " " " 1922	148.50	12.56	3.29	164.35
7 " " " 1922	332.99	13.70	26.68	373.37
1 " " " 1922	407.94	.....	43.20	451.14
1 " " " 1922	62.77	.....	3.28	66.05
2 " " " 1922	383.74	6.05	5.54	395.33
1 " " " 1922	4.89	.....	.51	5.40
9 " " " 1922	131.97	22.45	.....	154.42
1 " " " 1922	17.09	.....	1.85	18.94
1 " " " 1922	109.85	.....	6.77	116.62
1 " " " 1922	115.69	.....	15.39	131.08
1 " " " 1922	641.15	.....	102.10	743.25
1 " " " 1922	163.82	.....	14.47	178.29
1 " " " 1922	907.09	.....	70.90	977.99
1 " " " 1922	27.72	.....	5.95	33.67
1 " " " 1922	119.04	.....	10.47	129.51
1 " " " 1922	36.25	.....	3.69	39.94
10 " " " 1922	482.40	83.85	.....	566.25
2 " " " 1922	124.37	2.37	.....	126.74
2 " " " 1922	824.34	15.11	.....	839.45
9 " " " 1022	2,550.80	199.34	.....	2,750.14
1 " " " 1922	64.22	.....	176.51	240.73
1 " " " 1922	104.31	.....	3.28	107.59
10 " " " 1922	4,654.36	722.28	.....	5,376.64
8 " " " 1922	3,713.62	507.95	.....	4,221.57
8 " " " 1922	845.21	127.51	.....	972.72
	850,072.05	71,533.83	477,548.92	1,399,154.80
	296,936.72	44,299.11	.....	341,235.83
	1,147,008.77	115,832.94	477,548.92	1,740,390.63

NIAGARA

Statement Showing the Net Credit or Charge to Each Municipality in respect of thereon, Adjustments Made and Interest added during the Year; also the Net in the Year Ending 31st October, 1922, and the Accumulated Amount

Municipality	Date commenced operating	Net Credit or Charge at 31st October, 1921	
		Credit	Charge
		\$ c.	\$ c.
Acton.....	Jan., 1913	594.01	
Ailsa Craig.....	Jan., 1916	623.49	
Alvinston.....	April, 1922		
Aylmer.....	Mar., 1918		136.72
Ayr.....	Jan., 1915	362.21	
Baden.....	May, 1912	2,818.80	
Beachville.....	Aug., 1912		885.77
Blenheim.....	Nov., 1915	513.20	
Bolton.....	Feb., 1915		2,611.64
Bothwell.....	Sept., 1915	381.65	
Brampton.....	Nov., 1911		1,754.81
Brantford.....	Feb., 1914		320.37
Brigden.....	Jan., 1918		1,257.65
Burford.....	June, 1915		2,584.63
Burgessville.....	Nov., 1916	786.00	
Caledonia.....	Oct., 1912		35.88
Chatham.....	Feb., 1915	5,020.08	
Chippawa Village (see end of this table).....			
Clinton.....	Mar., 1914	231.20	
Comber.....	May, 1915		3,055.02
Dashwood.....	Sept., 1917		116.59
Delaware.....	Mar., 1915		72.82
Dereham Township.....	Sept., 1919		1,412.05
Dorchester.....	Dec., 1914	973.81	
Drayton.....	Mar., 1918	122.02	
Dresden.....	April, 1915	1,650.00	
Drumbo.....	Dec., 1914	235.10	
Dublin.....	Oct., 1917		631.82
Dundas.....	Jan., 1911		1,497.78
Dunnville.....	June, 1918		7,736.26
Dutton.....	Sept., 1915	31.29	
Elmira.....	Nov., 1913	1,740.92	
Elora.....	Nov., 1914	1,009.28	
Embro.....	Jan., 1915		2,922.18
Etobicoke Township.....	Aug., 1917	5,490.19	
Exeter.....	June, 1916		1,120.95
Fergus.....	Nov., 1914		1,107.75
Forest.....	Mar., 1917	447.01	
Galt.....	May, 1911		709.04
Georgetown.....	Sept., 1913	1,361.27	
Glencoe.....	Aug., 1920	489.52	
Goderich.....	Feb., 1914		9,572.43
Granton.....	July, 1916	291.92	
Guelph.....	Dec., 1910	16,180.60	
Hagersville.....	Sept., 1913	1,946.94	

SYSTEM—Continued

Power Supplied to it to 31st October, 1921, the Cash Receipts and Payments Amount Credited or Charged to Each Municipality in respect of Power Supplied Standing as a Credit or Charge to each Municipality at 31st October, 1922

Cash receipts and payments on account of such Credits and Charges, also adjustments made during the year		Interest at 4% per annum added during the year		Net amount Credited or Charged in respect of power supplied in the year ending 31st October, 1922		Accumulated amount standing as a Credit or Charge on 31st October, 1922	
Credited	Charged	Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	594.01	12.82	.....	328.94	.....	341.76	.....
.....	623.49	11.81	.....	202.27	.....	214.08	.....
.....	.....	.....	.....	.....	554.37	.....	554.37
136.72	.....	.....	2.45	735.93	.....	733.48	.....
.....	362.21	8.49	.....	415.64	.....	424.13	.....
.....	2,818.80	73.70	.....	.....	20.15	53.55	.....
885.77	.....	.....	18.05	533.77	.....	515.72	.....
.....	513.20	10.12	.....	1,310.37	.....	1,320.49	.....
.....	.....	.....	104.47	1,022.35	.....	.....	1,693.76
.....	381.65	7.48	.....	1,149.05	.....	1,156.53	.....
1,754.81	.....	.....	37.30	.....	2,053.89	.....	2,091.19
320.37	.....	.....	6.42	.....	3,191.11	.....	3,197.53
.....	.....	.....	50.31	.....	258.93	.....	1,566.89
396.21	.....	.....	94.96	101.37	.....	.....	2,182.01
.....	745.34	25.27	.....	.....	143.53	.....	77.60
35.88	.....	.....	.70	108.69	.....	107.99	.....
.....	5,020.08	92.42	.....	4,092.62	.....	4,185.04	.....
.....	231.20	4.51	.....	.....	373.81	.....	369.30
1,000.00	.....	.....	96.77	1,479.43	.....	.....	672.36
116.59	.....	.....	2.42	.....	17.97	.....	20.39
72.82	.....	.....	2.83	335.20	.....	332.37	.....
.....	.....	.....	56.48	.....	510.25	.....	1,978.78
.....	973.81	21.03	.....	43.40	.....	64.43	.....
.....	122.02	2.83	.....	358.41	.....	361.24	.....
.....	1,650.00	43.16	.....	70.48	.....	113.64	.....
.....	235.10	5.93	.....	272.75	.....	278.68	.....
.....	314.53	.....	22.28	.....	53.26	.....	1,021.89
1,497.78	.....	.....	29.05	.....	1,718.58	.....	1,747.63
2,582.40	.....	.....	309.45	3,216.48	.....	.....	2,246.83
.....	31.29	.67	.....	91.13	.....	91.80	.....
.....	1,740.92	30.34	.....	1,518.37	.....	1,548.71	.....
.....	1,009.28	22.68	.....	1,480.31	.....	1,502.99	.....
924.65	.....	.....	90.14	773.61	.....	.....	1,314.06
.....	5,490.19	158.68	.....	.....	1,309.63	.....	1,150.95
1,120.95	.....	.....	22.60	.....	1,677.36	.....	1,699.96
.....	.....	.....	44.31	1,841.88	.....	689.82	.....
.....	447.01	8.81	.....	732.80	.....	741.61	.....
709.04	.....	.....	14.22	.....	5,318.55	.....	5,332.77
.....	1,361.27	19.09	.....	56.50	.....	75.59	.....
.....	489.52	9.11	.....	989.90	.....	999.01	.....
1,060.44	.....	.....	360.93	.....	1,302.53	.....	10,175.45
.....	291.92	5.97	.....	142.25	.....	148.22	.....
.....	16,353.73	109.65	.....	.....	6,262.95	.....	6,326.43
.....	1,946.94	43.31	.....	2,137.60	.....	2,180.91	.....

NIAGARA

Statement Showing the Net Credit or Charge to Each Municipality in respect of thereon, Adjustments Made and Interest added during the Year; also the Net in the Year Ending 31st October, 1922, and the Accumulated Amount

Municipality	Date commenced operating	Net Credit or Charge at 31st October, 1921	
		Credit	Charge
		\$ c.	\$ c.
Hamilton	Feb., 1911	.....	24,449.94
Harriston	July, 1916	.....	572.44
Hensall	Jan., 1917	.....	312.18
Hespeler	Feb., 1911	.....	519.39
Highgate	Dec., 1916	233.42	.....
Ingersoll	May, 1911	10,377.26	.....
Kitchener	Jan., 1911	.....	5,338.77
Lambeth	April, 1915	2.69	.....
Listowel	June, 1916	2,331.15	.....
London	Jan., 1911	46,520.49	.....
London Railway Commission	Aug., 1914	.....	1,215.27
Lucan	Feb., 1915	2,014.16	.....
Lynden	Nov., 1915	448.42	.....
Markham	April, 1920	1,261.89	.....
Milton	April, 1913	2,446.65	.....
Milverton	June, 1916	2,991.13	.....
Mimico	May, 1912	.....	793.81
Mitchell	Sept., 1911	654.37	.....
Moorefield	Mar., 1918	204.56	.....
Mount Brydges	Mar., 1915	.....	82.43
Newbury	Mar., 1921	13.17	.....
New Hamburg	Mar., 1911	.....	396.67
New Toronto	Feb., 1914	.....	8,293.83
Niagara Falls	Dec., 1915	.....	7,352.04
Niagara-on-Lake	Aug., 1919	1,705.58	.....
Norwich	May, 1912	3,058.69	.....
Oil Springs	Feb., 1918	.....	303.23
Otterville	Feb., 1916	177.04	.....
Palmerston	July, 1916	1,097.92	.....
Paris	Feb., 1914	.....	907.46
Parkhill	May, 1920	480.87	.....
Petrolia	May, 1916	3,177.80	.....
Plattsville	Dec., 1914	.....	873.01
Port Credit	Aug., 1912	.....	165.21
Port Dover	Dec., 1921	.....	.....
Port Stanley	April, 1912	1,768.87	.....
Preston	Jan., 1911	.....	997.29
Princeton	Jan., 1915	.....	907.22
Queenston	Mar., 1921	.....	12.60
Ridgetown	Dec., 1915	842.88	.....
Rockwood	Sept., 1913	.....	1,585.67
Rodney	Feb., 1917	2,287.05	.....
St. George	Sept., 1915	191.47	.....
St. Jacobs	Sept., 1917	.....	105.45
St. Marvs.	May, 1911	948.58	.....

SYSTEM—Continued

Power Supplied to it to 31st October, 1921, the Cash Receipts and Payments Amount Credited or Charged to Each Municipality in respect of Power Supplied Standing as a Credit or Charge to each Municipality at 31st October, 1922

Cash receipts and payments on account of such Credits and Charges, also adjustments made during the year		Interest at 4% per annum added during the year		Net amount Credited or Charged in respect of power supplied in the year ending 31st October, 1922		Accumulated amount standing as a Credit or Charge on 31st October, 1922	
Credited	Charged	Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
24,449.94			482.30		53,638.19		54,120.49
572.44			20.95	55.74		34.79	
312.18			5.30		511.57		516.87
519.39			12.91		59.30		72.71
	233.42	4.29		42.68		46.97	
	10,377.26	188.34		254.42		442.76	
			213.55		12,376.92		17,929.24
	2.69	.09		1,006.98		1,007.07	
	2,331.15	36.02			335.94		299.92
	46,520.49	219.57			15,090.91		14,871.34
1,215.27			28.90		8,266.17		8,295.07
	2,014.16	41.07			104.21		63.14
	448.42	8.43		388.39		396.82	
	1,261.89	27.24		2,288.94		2,316.18	
	2,496.52	49.87		705.42		705.42	
	2,991.13	57.04			24.83	32.21	
793.81			23.84		1,655.85		1,679.69
	654.37	11.04		33.16		44.20	
	204.56	4.80			161.29		156.49
82.43			1.73	204.08		202.35	
	13.17	.28		268.19		268.47	
396.67			7.95		28.47		36.42
8,293.83			197.74		6,832.34		7,030.08
6,934.90			182.36		11,449.92		12,049.42
	1,705.58	33.12		154.41		187.53	
	3,082.53	26.28			104.50		102.06
			12.13	2,180.18		1,864.82	
	177.04	3.54		38.49		42.03	
	1,097.92	15.69		335.47		351.16	
907.46			14.02		614.58		628.60
	480.87	10.84		596.91		607.75	
	3,177.80	58.51		580.48		638.99	
			34.92		532.38		1,440.31
165.21			2.91		972.60		975.51
				233.20		233.20	
	1,768.87	41.60		849.26		890.86	
997.29			23.71	154.07		130.36	
300.00			35.36	257.72			384.86
12.60			.22		115.66		115.88
	842.88	17.03		627.55		644.58	
435.47			54.59	525.96			678.83
	2,334.55	47.55		388.17		388.22	
	191.47	4.41		572.13		576.54	
105.45			1.80	263.92		262.12	
	948.58	20.48		516.10		536.58	

NIAGARA

Statement Showing the Net Credit or Charge to Each Municipality in respect of thereon, Adjustments Made and Interest added during the Year; also the Net in the Year Ending 31st October, 1922, and the Accumulated Amount

Municipality	Date commenced operating	Net Credit or Charge at 31st October, 1921	
		Credit	Charge
St. Thomas.....	April, 1911	\$ c.	\$ c.
Sarnia.....	Dec., 1916	15,478.49	972.51
Scarboro Township.....	Aug., 1918		811.91
Seaforth.....	Nov. 1911	189.81	
Simcoe.....	Aug., 1915		560.81
Springfield.....	Aug., 1917		54.28
Stamford Township.....	Nov., 1916	414.23	
Stratford.....	Jan., 1911	1,864.48	
Strathroy.....	Dec., 1914	1,514.02	
Streetsville.....		4,524.99	
Tavistock.....	Nov., 1916	1,118.77	
Thamesford.....	Feb., 1914	218.21	
Thamesville.....	Oct., 1915	330.30	
Thedford.....			
Thorndale.....	Mar., 1914		1,910.24
Tilbury.....	April, 1915		2,638.05
Tillsonburg.....	Aug., 1911		1,501.62
Toronto.....	June, 1911		76,929.90
Toronto Township.....	Aug., 1913		416.81
Walkerville.....	Nov., 1914	14,564.09	
Wallaceburg.....	Feb., 1915	6,332.08	
Wardsville.....	June, 1921		34.83
Waterdown.....	Nov., 1911		155.77
Waterford.....	April, 1915	312.10	
Waterloo.....	Dec., 1910		439.71
Watford.....	Sept., 1917		929.51
Welland.....	Sept., 1917		2,381.46
Wellesley.....	Nov., 1916	38.66	
West Lorne.....	Jan., 1917	2,184.30	
Weston.....	Jan., 1911		1,453.36
Windsor.....	Oct., 1914	29,373.26	
Woodbridge.....	Dec., 1914		103.15
Woodstock.....	Jan., 1911		2,688.07
Wyoming.....	Nov., 1916		1,572.97
Zurich.....	Sept., 1917		533.38

SYSTEM—Continued

Power Supplied to it to 31st October, 1921, the Cash Receipts and Payments Amount Credited or Charged to Each Municipality in respect of Power Supplied Standing as a Credit or Charge to each Municipality at 31st October, 1922

Cash receipts and payments on account of such Credits and Charges, also adjustments made during the year		Interest at 4% per annum added during the year		Net amount Credited or Charged in respect of power supplied in the year ending 31st October, 1922		Accumulated amount standing as a Credit or Charge on 31st October, 1922	
Credited	Charged	Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
972.51			22.59	782.01		759.42	
	15,478.49	260.96		3,156.41		3,417.37	
811.91			24.02	685.51		661.49	
	189.81	4.10			196.99		192.89
560.81			11.68	734.82		723.14	
			2.17	192.28		135.83	
	414.23	7.35			239.21		231.86
	1,864.48	36.78			1,309.52		1,272.74
	1,514.02	12.92		355.47		368.39	
		181.00		445.36		5,151.35	
	1,142.19	23.42		6.15		6.15	
	218.21	4.30		862.64		866.94	
	330.30	6.33		710.68		717.01	
				152.41		152.41	
553.74			57.91	192.30			1,222.11
2,714.33			76.28	2,106.73		2,106.73	
1,501.62			30.11		1,101.87		1,131.98
76,929.90			1,273.03		142,846.26		144,119.20
416.81			8.86	18.29		9.43	
	14,564.09	284.10		12,816.20		13,100.30	
	6,332.08	155.31		358.97		514.28	
34.83			.74		46.59		47.33
155.77			3.02	50.27		47.25	
	312.10	6.74		574.77		581.51	
439.71			9.34		2,174.50		2,183.84
1,340.22			23.29	1,212.41		1,599.83	
			95.26		5,132.36		7,609.08
	38.66	.76			193.88		193.12
	2,184.30	41.90		1,081.91		1,123.81	
1,453.36			35.68		794.94		830.62
	29,373.26	473.19		24,857.81		25,331.00	
103.15			2.53		143.58		146.11
2,688.07			54.20		731.07		785.27
			62.92		85.63		1,721.52
533.38			10.81	201.97		191.16	

NIAGARA

Statement Showing the Net Credit or Charge to Each Municipality in respect of thereon, Adjustments made and Interest added during the Year; also the Net in the Year Ending 31st October, 1922, and the Accumulated Amount

Municipality	Date commenced operating	Net Credit or Charge at 31st October, 1921	
		Credit	Charge
		\$ c.	\$ c.
Aylmer Rural Power District.....	Nov., 1920		733.49
Baden Rural Power District.....			
Chatham Rural Power District.....	May, 1922		
Brant Rural Power District.....	Oct., 1914	219.55	
Dorchester Rural Power District.....	Dec., 1921		
Drumbo Rural Power District.....	Aug., 1922		
Dundas Rural Power District.....	Jan., 1921	259.99	
Galt Rural Power District.....	Oct., 1922		
Ingersoll Rural Power District.....	Oct., 1914	274.90	
Jordan Rural Power District.....	May, 1922		
Lynden Rural Power District.....	Feb., 1922		
Niagara Rural Power District.....	Jan., 1922		
Preston Rural Power District.....	Apr., 1922		
Ridgetown Rural Power District.....	Mar., 1922		
Saltfleet Rural Power District.....	Feb., 1922		
Sandwich Rural Power District.....	July, 1922		
Stamford Rural Power District.....	Mar., 1922		
Welland Rural Power District.....	Apr., 1922		
Woodstock Rural Power District.....	Feb., 1913	1,356.68	
Municipalities which are supplied with power directly from the Ontario Power Co.			
Merritton.....	Nov. 1920	503.58	
Port Colborne.....	Mar. 1920	442.08	
St. Catharines.....			
Chippawa Village.....	Sept. 1919	821.19	
Chippawa R.P.D.....	July, 1922		
Welland (Pt. Robinson).....	Mar., 1913	61.68	
Grantham Township.....	May, 1915	14.97	
Port Dalhousie.....	Nov., 1912	212.78	
		211,161.87	191,547.90

SYSTEM—Continued

Power Supplied to it to 31st October, 1921, the Cash Receipts and Payments Amount Credited or Charged to Each Municipality in respect of Power Supplied Standing as a Credit or Charge to each Municipality at 31st October, 1922

Cash receipts and payments on account of such Credits and Charges, also adjustments made during the year		Interest at 4% per annum added during the year		Net amount Credited or Charged in respect of power supplied in the year ending 31st October, 1922		Accumulated amount standing as a Credit or Charge on 31st October, 1922	
Credited	Charged	Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
			29.34		577.01		1,339.84
					388.52		388.52
				873.10		873.10	
		8.78		466.35		694.68	
				3,548.96		3,548.96	
				143.30		143.30	
		10.40		1,065.32		1,335.81	
				56.71		56.71	
		11.00		12.00		297.96	
				153.55		153.55	
				120.73		120.73	
				590.28		590.28	
				4,763.31		4,763.31	
				2,149.39		2,149.39	
				3,503.46		3,503.46	
				491.77		491.77	
				564.11		564.11	
				184.95		184.95	
		54.27			8.32	1,402.63	
	317.92	7.43			720.88		527.79
	588.38		5.86		404.13		556.29
					10,720.94		10,720.94
	821.19	19.53		346.71		366.24	
				464.73		464.73	
		2.47			760.04		695.89
		.60			324.80		309.23
		8.51			714.19		492.90
150,318.89	204,788.54	3,277.16	4,562.97	110,117.72	307,257.73	110,304.21	343,585.74

NIAGARA SYSTEM RURAL LINES

**Statement Showing the Interest and Sinking Fund Charged by The Commission to
the Municipalities which operate the respective Rural Lines for
the year ending 31st October, 1922**

Operated by	Capital cost	Interest	Sinking Fund	Total interest and Sinking Fund Charged
	\$ c.	\$ c.	\$ c.	\$ c.
Ancaster	5,159.03	257.96	92.86	350.82
Bolton	2,110.45	105.52	37.98	143.50
Bothwell	6,571.84	355.88	547.44	903.32
Brampton	588.87	29.44	10.60	40.04
Chatham		33.68	12.12	45.80
Dereham Township	29,243.50	1,483.42	526.36	2,009.78
Elora	777.82	38.90	14.00	52.90
Etobicoke	54,608.68	2,984.10	982.96	3,967.06
Georgetown	8,889.59	444.48	160.00	604.48
Goderich	2,313.36	115.66	41.64	157.30
Lucan	333.26	16.66	6.00	22.66
Milton	813.82	40.70	14.64	55.34
Norwich	34,425.48	1,732.98	619.66	2,352.64
Preston				
St. Thomas	1,933.82	96.70	34.80	131.50
Scarboro Township	29,892.77	1,722.92	538.08	2,261.00
Stratford	4,058.47	202.92	73.04	275.96
Toronto	628.65	44.00	15.84	59.84
Vaughan Township	21,972.39	1,235.78	396.16	1,631.94
Walkerville	45,477.76	2,333.01	818.60	3,151.61
Waterdown	13,370.80	691.72	240.68	932.40
Waterford	3,399.87	170.00	61.20	231.20
Waterloo	5,062.60	230.60	91.14	321.74
Weston	5,234.46	209.38	94.22	303.60
Windsor	26,653.12	1,529.97	479.76	2,009.73
Woodstock	1,088.20	54.42	19.58	74.00
Louth Township	2,771.19	138.56	49.88	188.44
Non-Operating	31.33			
Totals	307,411.13	16,299.36	5,979.24	22,278.60

NIAGARA SYSTEM RURAL LINES

Statement Showing the Total Sinking Fund Requirements on Each Line—All of which have been Paid—And the Total of Such Sinking Fund Payments with Interest allowed thereon to 31st October, 1922

Lines operated by	Sinking Fund requirements		Sinking Fund paid		Interest at 4% per annum allowed on Sinking Fund payments	Total Sinking Fund payments and accumulated interest to 31st October, 1922
	Period covered	Amount	Period covered	Amount		
					\$	c.
Ancaster Township.....	9 years ending 31 Oct. 1922	821.17	Full period	821.17	155.11	976.28
Bolton.....	8 " " 1922	237.89	" "	237.89	28.49	266.38
Bothwell.....	7 " " 1922	2,849.93	" "	2,849.93	255.47	3,105.40
Brampton.....	5 " " 1922	54.76	" "	54.76	5.19	59.95
Dereham Township.....	5 " " 1922	2,507.25	" "	2,507.25	199.70	2,706.95
Elora.....	9 " " 1922	111.91	" "	111.91	16.97	128.88
Etobicoke.....	7 " " 1922	6,082.36	" "	6,082.36	736.09	6,818.45
Georgetown.....	9 " " 1922	1,264.99	" "	1,264.99	194.26	1,459.25
Goderich.....	9 " " 1922	349.90	" "	349.90	55.89	405.79
Louth Township.....	4 " " 1922	257.71	" "	257.71	22.06	279.77
Lucan.....	3 " " 1922	18.00	" "	18.00	.73	18.73
Milton.....	9 " " 1922	117.84	" "	117.84	17.90	135.74
Norwich.....	10 " " 1922	4,404.82	" "	4,404.82	602.42	5,007.24
Preston.....	10 " " 1922	1,378.55	" "	1,378.55	292.06	1,670.61
St. Thomas.....	9 " " 1922	277.37	" "	277.37	42.04	319.41
Scarboro Township.....	5 " " 1922	2,482.13	" "	2,482.13	184.29	2,666.42
Stratford.....	10 " " 1922	650.81	" "	650.81	113.19	764.00
Toronto.....	10 " " 1922	48.19	" "	48.19	4.90	53.09
Vaughan Township.....	8 " " 1922	1,840.59	" "	1,840.59	143.46	1,984.05
Walkerville.....	8 " " 1922	4,952.05	" "	4,952.05	607.49	5,559.54
Waterdown.....	9 " " 1922	1,752.48	" "	1,752.48	268.99	2,021.47
Waterford.....	8 " " 1922	342.14	" "	342.14	32.12	374.26
Waterloo.....	9 " " 1922	604.46	" "	604.46	76.77	681.23
Weston.....	9 " " 1922	819.75	" "	819.75	138.10	957.85
Windsor.....	7 " " 1922	1,421.49	" "	1,421.49	110.26	1,531.75
Woodstock.....	10 " " 1922	163.78	" "	163.78	26.53	190.31
		35,812.32		35,812.32	4,330.48	40,142.80

SEVERN

Operating Account for Year

COSTS OF OPERATION AS PROVIDED FOR UNDER SECTIONS 6C AND 23 OF THE ACT

Power purchased from Wasdell System and Orillia	\$13,847.34
Costs of operating and maintaining the Generating Plant, Transmission Lines, Stations, etc., including the proportion of Administrative Expenses chargeable to the operation of this System	67,110.27
Interest on Capital Investment	62,509.06
Provisions for Renewal of Generating Plant, Lines and Stations, etc.	20,053.97
Provisions for Contingencies:	
By charges against Municipalities	\$4,866.40
By charges against contracts with Private Companies, also the Eugenia System, which purchased power	1,445.20
By appropriating the net profit on power sold to Private Companies . .	6,198.85
	<hr/>
	12,510.45
Provisions for Sinking Fund:	
By charges against Municipalities	16,853.59
By charges against contracts with Private Companies, also the Eugenia System, which purchased power	4,400.12
	<hr/>
	21,253.71
	<hr/>
	<u>\$197,284.80</u>

SYSTEM

Ending 31st October, 1922

REVENUE FOR PERIOD

Collected from Municipalities.....	\$187,860.89
Power sold to Private Companies and the Eugenia System.....	40,697.47
Add amounts due by certain Municipalities being the difference between sums paid and the costs of power supplied to them in the period.....	\$626.64
Deduct amounts collected from certain Municipalities in excess of the sum required to be paid by them for power supplied in the period....	31,900.20
	<u>31,273.56</u>
 REVENUE.....	 197,284.80
	<u><u>\$197,284.80</u></u>

SEVERN

Statement Showing the Amount to be Paid by Each Municipality as the Cost, under Received by the Commission from Each Municipality on Account of Such Cost, upon ascertainment (by Annual Adjustment) of the Actual Cost of

Municipality	Interim Rates per Horsepower collected by Commission during year		Share of Capital Cost of system on which interest and fixed charges are payable	Average Horse-power supplied in year after correction for power factor	Cost of Power purchased from Orillia and Wasdells system	Share of Operating	
	To Dec. 31, 1921	To Oct. 31, 1922				Operating, Maintenance and Administrative expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
Alliston.....	60.00	65.00	67,702.03	111.9	245.50	1,877.80	2,894.19
Barrie.....	29.00	29.00	177,192.67	866.9	1,901.94	8,703.53	7,586.17
Beeton.....	85.00	85.00	61,101.98	84.5	185.39	1,785.42	2,615.41
Bradford.....	75.00	75.00	54,743.86	58.9	129.22	1,572.28	2,343.17
Coldwater.....	60.00	60.00	20,291.23	83.7	183.64	829.75	868.80
Collingwood...	36.00	45.00	277,030.92	1,124.3	2,466.66	14,377.48	11,759.43
Cookstown...	60.00	60.00	22,990.20	52.1	114.30	901.89	984.13
Creemore.....	65.00	70.00	24,754.14	53.	116.28	1,050.14	1,059.61
Elmvale.....	37.00	37.00	30,481.93	150.8	330.85	1,693.83	1,305.03
Midland.....	32.00	32.00	231,618.34	1,290.3	2,830.86	11,060.06	9,916.72
Penetang.....	30.00	30.00	132,207.66	695.1	1,525.02	6,026.09	5,660.34
Port McNicoll.	85.00	40.00	8,888.64	43.3	95.00	489.38	379.06
Stayner.....	40.00	45.00	30,484.00	120.5	264.37	1,717.50	1,305.04
Thornton.....	85.00	85.00	11,599.45	13.8	30.28	383.78	496.50
Tottenham....	90.00	90.00	37,845.15	38.6	84.68	1,174.43	1,619.85
Victoria Harbor	45.00	45.00	12,872.55	46.	100.92	762.32	549.36
Waubashene...	45.00	45.00	6,876.08	25.4	55.72	389.40	294.37
Nottawasaga Rural Power Districts....			12,439.41	7.3	16.02	615.19	409.36
Totals—Municipalities.....			1,221,120.24	4,866.4	10,676.65	55,390.27	52,046.54
Totals—Companies.....			266,781.32	1,445.2	3,170.69	11,720.00	
Non-operating Capital.....			814.29				10,462.52
Grand Totals.....			1,488,715.85	6,311.6	13,847.34	67,110.27	62,509.06
50% Eugenia Tie Line included in above Capital.....			46,413.95				

SYSTEM

Section 23 of the Act, of Power Supplied to it by the Commission, the Amount and the Amount remaining to be Credited or Charged to Each Municipality Power Supplied to it in the Year Ending 31st October, 1922

Costs and Fixed Charges.			Total Cost of Power for year as provided to be paid under section 23 of Act	Amounts paid to the Commission by each municipality	Amounts remaining to be Credited or Charged to each municipality upon ascertainment of the actual cost of power by annual adjustment		Sinking Fund for the years mentioned hereunder charged as part of the cost of power in the year 1921-1922
Renewals	Contingencies	Sinking Fund			Credited	Charged	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
912.89	111.90	.....	6,042.28	7,165.34	1,123.06	.....	.....
2,392.83	866.90	2,475.60	23,926.97	25,140.07	1,213.10	.....	1919-20
824.95	84.50	.....	5,495.67	6,913.00	1,417.33	.....	.....
739.08	58.90	.....	4,842.65	4,415.60	.....	427.05	.....
274.04	83.70	294.51	2,534.44	4,505.50	1,971.06	.....	1919-20
3,709.16	1,124.30	5,811.86	39,248.89	48,748.50	9,499.61	.....	1919-20
310.41	52.10	.....	2,362.83	2,972.50	.....	.....	.....
334.22	53.00	398.28	2,991.53	3,465.94	474.41	.....	1918-19
411.63	150.80	529.51	4,421.65	5,580.96	1,159.31	.....	1919-20
3,127.94	1,290.30	3,753.07	31,978.95	41,288.52	9,309.57	.....	1919-20
1,785.39	695.10	2,380.52	18,072.46	20,853.87	2,781.41	.....	1921-22
119.56	43.30	127.81	1,254.11	2,085.32	831.21	.....	1918-19
411.64	120.50	557.09	4,376.14	5,318.93	942.79	.....	1919-20
156.62	13.80	.....	1,080.98	1,173.69	92.71	.....	.....
510.93	38.60	.....	3,428.49	3,474.75	46.26	.....	.....
173.28	46.00	194.26	1,826.14	2,068.48	242.34	.....	1918-19
92.85	25.40	97.76	955.50	1,141.86	186.36	.....	1918-19
466.46	7.30	233.32	1,747.65	1,548.06	.....	199.59	1921-22
16,753.88	4,866.40	16,853.59	156,587.33	187,860.89	31,900.20	626.64	
3,300.09	1,445.20	4,400.12	34,498.62	40,697.47	*6,198.85		
20,053.97	6,311.60	21,253.71	191,085.95	228,558.36			

*NOTE—Transferred to credit of Contingency Reserve.

SEVERN SYSTEM

Reserve for Contingencies Account, 31st October, 1922

Balance brought forward, 31st October, 1921.....	\$7,128.08
Amount added on account of reduction in Cost of Power to Sundry Companies, due to reduction in depreciation rate from commencement of operations.....	14,668.51
Added during the year ending 31st October, 1922:	
Amounts charged to Municipalities as part of the Cost of Power delivered to them.....	\$4,866.40
Provision against equipment employed in respect of contracts with Sundry Companies.....	1,445.20
Net profits from contracts with Sundry Power Customers.....	6,198.85
Interest at 4% per annum on monthly balances to the credit of the account.....	871.86
	13,382.31
	\$35,178.90
Expenditures during the year ending 31st October, 1922.....	5,958.82
Balance carried forward 31st October, 1922.....	\$29,220.08

SEVERN

Statement Showing the Total Sinking Fund Requirements to be met by each Deferred by the Commission under Section 23 of the Act, Sinking Fund Pay-five years, and the Total of Such Sinking Fund Payments including

Municipality	Total Sinking Fund requirements chargeable to the municipality under the Act		Sinking Fund requirements the payment of which has been deferred	
	(a) For period of	(b) Amount	(a) For period of	(b) Amount
		\$ c.		\$ c.
Alliston.....	5 years ending 31 Oct., 1922	5,684.10	5 years ending 31 Oct., 1922	5,684.10
Barrie.....	6 " " " 1922	13,270.78	2 " " " 1922	6,210.01
Beeton.....	5 " " " 1922	4,975.00	5 " " " 1922	4,975.00
Bradford.....	5 " " " 1922	3,820.69	5 " " " 1922	3,820.69
Coldwater.....	6 " " " 1922	1,669.66	2 " " " 1922	704.11
Collingwood....	6 " " " 1922	29,786.26	2 " " " 1922	9,544.86
Cookstown.....	5 " " " 1922	2,013.54	5 " " " 1922	2,013.54
Creemore.....	6 " " " 1922	2,458.25	3 " " " 1922	1,306.22
Elmvale.....	6 " " " 1922	2,664.39	2 " " " 1922	1,136.48
Midland.....	6 " " " 1922	20,808.84	2 " " " 1922	8,377.62
Penetang.....	6 " " " 1922	12,458.65		
Port McNicoll..	6 " " " 1922	805.76	3 years ending 31 Oct. 1922	471.88
Stayner.....	6 " " " 1922	2,735.53	2 " " " 1922	1,144.18
Thornton.....	4 " " " 1922	781.55	4 " " " 1922	781.55
Tottenham.....	5 " " " 1922	2,578.68	5 " " " 1922	2,578.68
Victoria Harbor	6 " " " 1922	1,224.81	3 " " " 1922	720.38
Waubashene...	6 " " " 1922	631.75	3 " " " 1922	369.46
Nottawasaga....	1 " " " 1922	233.32		
Rural Power District.				
Totals—Municipalities.....		108,601.56		49,838.76
Totals—Companies (from commencement of operations.....		19,379.41		
Grand Totals.....		127,980.97		49,838.76

SEVERN SYSTEM

Reserve for Renewals Account, 31st October, 1922

Total provision for Renewals to 31st October, 1921.....	\$ 235,243.10	
Less reductions upon adjustment of Renewals Rates.....	119,976.30	
		\$ 115,271.80
Deduct expenditures to 31st October, 1921.....		7,900.89
		<u>107,370.91</u>
Balance brought forward 31st October, 1921.....		
Added during the year ending 31st October, 1922:		
Amounts charged to municipalities as part of the Cost of Power delivered to them.....	16,753.88	
Provision against equipment employed in respect of contracts with Sundry Companies.....	3,300.09	
Interest at 4% per annum on monthly balances to the credit of the account.....	4,294.84	
Renewals reserve provided on second-hand equipment purchased..	1,533.14	
		<u>25,881.95</u>
		133,252.86
Expenditures during the year ending 31st October, 1922.....		<u>509.14</u>
Balance carried forward 31st October, 1922.....		<u>\$ 132,743.72</u>

SYSTEM

Municipality, Sinking Fund Requirements the Payment of which has been made by Certain Municipalities which have been Operating more than Interest allowed thereon to 31st October, 1922.

Sinking Fund requirements paid (or charged) as part of the cost of power		Interest at 4% per annum allowed on Sinking Fund requirements which have been paid	Total Sinking Fund payments and accumulated interest to the credit of the municipality on 31st October, 1922
(a) For period of	(b) Amount		
	\$ c.	\$ c.	\$ c.
4 years ending 31 Oct., 1920	7,060.77	351.70	7,412.47
4 years ending 31 Oct., 1920	965.55	53.37	1,018.92
4 " " " 1920	20,242.40	1,113.26	21,355.66
3 years ending 31 Oct., 1919	1,152.03	46.55	1,198.58
4 " " " 1920	1,527.91	73.76	1,601.67
4 " " " 1920	12,431.22	623.11	13,054.33
6 " " " 1922	12,458.65	1,072.20	13,530.85
3 " " " 1919	333.88	12.42	346.30
4 " " " 1920	1,591.35	73.77	1,665.12
3 years ending 31 Oct., 1919	504.43	18.74	523.17
3 " " " 1919	262.29	9.96	272.25
1 " " " 1922	233.32		233.32
(From commencement of operations).....	58,763.80	3,448.84	62,212.64
	19,379.41	2,021.33	21,400.74
	<u>78,143.21</u>	<u>5,470.17</u>	<u>83,613.38</u>

SEVERN

Statement Showing the Net Credit or Charge to each Municipality in Respect of thereon, Adjustments made and Interest added during the Year; also the Net in the year Ending 31st October, 1922, and the Accumulated Amount

Municipality	Date commenced operating	Net Credit or Charge at 31st October, 1921		Amounts Credited upon adjustment of renewals reserve
		Credit	Charge	
		\$ c.	\$ c.	\$ c.
Alliston.....	June, 1918		7,952.10	3,639.58
Barrie.....	April, 1913		4,201.41	15,649.24
Beeton.....	Aug., 1918		4,254.80	3,162.54
Bradford.....	Oct., 1918		8,470.66	2,297.83
Coldwater.....	Mar., 1913		1,842.49	1,949.11
Collingwood.....	Mar., 1913		7,572.28	31,193.28
Cookstown.....	May, 1918		1,687.50	1,309.41
Creemore.....	Nov., 1914	1,466.34		2,770.37
Elmvale.....	June, 1913	523.49		2,667.51
Midland.....	July, 1911		12,462.64	19,030.34
(No capital invested prior to 1914)				
Penetang.....	July, 1911		636.91	13,504.68
Port McNicoll.....	Jan., 1915	231.49		784.13
Stayner.....	Oct., 1913		718.56	3,320.92
Thornton.....	Nov., 1918		1,664.39	462.38
Tottenham.....	Oct., 1918		4,519.96	1,538.69
Victoria Harbor.....	July, 1914	484.22		1,402.79
Waubashene.....	Dec., 1914		191.78	624.99
Nottawasaga R.P.D.....				
Totals.....		2,705.54	56,175.48	105,307.79

EUGENIA

Operating Account for

COSTS OF OPERATION AS PROVIDED FOR UNDER SECTIONS 6C AND 23 OF THE ACT

Power purchased from Severn System.....	\$4,689.18
Costs of operating and maintaining the Generating Plant, Transmission Lines, Stations, etc., including the proportion of Administrative Expenses chargeable to the operation of this System.....	73,818.54
Interest on Capital Investment.....	92,207.34
Provision for Renewal of Generating Plant, Lines, Stations, etc.....	25,111.30
Provisions for Contingencies:	
By charges against Municipalities.....	\$5,230.10
By charges against contracts with private companies, which purchased power.....	143.50
	5,373.60
Provisions for Sinking Fund:	
By charges against Municipalities.....	\$24,269.80
By charges against contracts with private companies which purchased power.....	1,072.06
	25,341.86
	<u>\$226,541.82</u>

SYSTEM

Power Supplied to it to 31st October, 1921, the Cash Receipts and Payments Amount Credited or Charged to each Municipality in respect of Power supplied standing as a Credit or Charge to each Municipality at 31st October, 1922

Cash receipts and payments on account of such Credits and Charges during the year		Interest at 4% per annum added during the year		Net amount Credited or Charged in respect of power supplied in the year ending 31st October, 1922		Accumulated amount standing as a Credit or Charge on 31st October, 1922	
Credited	Charged	Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
			172.74	1,123.06			3,362.20
		457.92		1,213.10		13,118.85	
			43.69	1,417.33		281.38	
			246.92		427.05		6,846.80
		4.26		1,971.06		2,081.94	
		944.84		9,499.61		34,065.45	
			15.12	609.67		216.46	
	1,466.34	152.05		474.41		3,396.83	
	523.49	118.00		1,159.31		3,944.82	
12,462.64		309.14		9,309.57		28,649.05	
636.91		526.65		2,781.41		16,812.74	
	231.49	34.95		831.21		1,650.29	
718.56		119.38		942.79		4,383.09	
			48.08	92.71			1,157.38
			119.25	46.26			3,054.26
	484.22	68.38		242.34		1,713.51	
191.78		19.27		186.36		830.62	
					199.59		199.59
14,009.89	2,705.54	2,754.84	645.80	31,900.20	626.64	111,145.03	14,620.23

SYSTEM

Year Ending 31st October, 1922

REVENUE FOR PERIOD

Collected from Municipalities	\$242,352.59
Power sold to Private Companies	7,104.25
	<u>\$249,456.84</u>
Add amounts due by certain Municipalities being the difference between sums paid and the costs of power supplied to them in the period	\$9,351.17
Deduct amounts collected from certain Municipalities in excess of the sum required to be paid by them for power supplied in the period...	32,929.63
	<u>23,578.46</u>
REVENUE	\$225,878.38
Loss on Sale of Power supplied to Private Companies (written off against Contingency Reserve)	663.44
	<u><u>\$226,541.82</u></u>

EUGENIA

**Statement Showing the Amount to be Paid by Each Municipality as the Cost—
Received by the Commission from Each Municipality on Account of such
upon Ascertainment (by Annual Adjustment) of the Actual**

Municipality	Interim rates per Horsepower collected by Commission during Year		Share of Capital Cost of system on which interest and fixed charges are payable	Average Horse-power supplied in year after correction for power factor	Cost of Power purchased from Severn system	Share of Operating	
	To Dec. 31, 1921	To Oct. 31, 1922				Operating, Maintenance and Administrative expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
Arthur.....	85.00	85.00	80,105.00	120.3	104.98	2,821.67	3,665.51
Chatsworth....	60.00	70.00	12,532.91	36.5	31.85	446.74	576.86
Chesley.....	55.00	55.00	101,460.10	262.3	228.89	3,774.28	4,633.18
Dundalk.....	50.00	55.00	26,851.53	90.5	78.97	1,239.92	1,230.72
Durham.....	50.00	50.00	89,408.27	339.9	296.62	4,134.70	3,886.43
Elmwood.....	55.00	55.00	14,972.26	36.9	32.20	821.17	684.37
Flesherton....	45.00	55.00	15,851.81	44.8	39.09	959.19	729.08
Grand Valley..	70.00	60.00	34,660.97	65.3	56.98	1,240.95	1,594.31
Hanover.....	40.00	35.00	355,765.15	1,270.3	1,108.51	13,038.86	16,230.26
Holstein.....	90.00	90.00	12,126.35	10.6	9.25	324.05	556.00
Kincardine....	48.00	48.00	107,705.29	134.1	117.02	3,164.67	4,937.13
Lucknow.....	60.00	60.00	55,709.19	76.9	67.11	1,661.15	2,552.67
Markdale.....	50.00	50.00	23,805.79	90.4	78.88	1,179.07	1,094.80
Mount Forest..	65.00	65.00	75,133.68	180.5	157.52	3,244.80	3,453.65
Neustadt.....	55.00	55.00	74,464.82	191.4	167.02	2,697.13	3,405.02
Orangeville....	65.00	65.00	94,006.13	188.4	164.40	3,406.68	4,320.82
Owen Sound....	30.00	40.00	399,647.28	1,452.4	1,267.41	14,929.98	18,395.51
Priceville.....	47.00	47.00	6,431.07	9.2	8.03	194.58	295.87
Ripley.....	60.00	60.00	50,884.34	65.3	56.98	1,474.00	2,332.24
Shelburne.....	50.00	50.00	51,261.77	144.6	126.18	2,368.68	2,354.79
Tara.....	90.00	90.00	42,434.88	45.3	39.53	1,088.62	1,952.44
Teeswater.....	40.00	40.00	56,249.99	108.8	94.94	1,887.53	2,573.47
Wingham.....	45.00	45.00	171,844.29	263.5	229.94	4,662.76	7,870.77
Flesherton Rural Power District.....			2,343.04	.8	.70	65.93	76.18
Walkerton Quarry Rural Power Dist..			1,889.86	1.1	.96	48.74	65.53
Totals—Municipalities.....			1,957,545.77	5,230.1	4,563.96	70,875.85	89,467.61
Totals—Companies.....			59,951.21	143.5	125.22	2,942.69	2,739.73
Non-operating Capital.....			103.61				
Grand Totals.....			2,017,600.59	5,373.6	4,689.18	73,818.54	92,207.34

50% Tie Line Transferred to Severn System, \$46,413.95

SYSTEM

Under Section 23 of the Act,—of Power Supplied to it by the Commission, the Amount Cost, and the Amount Remaining to be Credited or Charged to Each Municipality
Cost of Power Supplied to it in the Year Ending 31st October, 1922

Costs and Fixed Charges.			Total Cost of Power for year as provided to be paid under section 23 of Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual Cost of Power by annual adjustment		Sinking fund for the years mentioned hereunder charged as part of the Cost of Power in the year 1921-1922
Renewals	Contingencies	Sinking Fund			Credited	Charged	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
996.06	120.30	1,640.04	9,348.56	9,696.34	347.78	.....	1920-21
156.75	36.50	225.73	1,474.43	2,433.91	959.48	.....	1921-22
1,259.02	262.30	1,777.53	11,935.20	14,426.72	2,491.52	.....	1920-21
334.43	90.50	481.59	3,456.13	4,892.72	1,436.59	.....	1921-22
1,056.09	339.90	1,520.77	11,234.51	17,479.05	6,244.54	.....	1921-22
185.97	36.90	.....	1,760.61	1,978.59	217.98	.....	.....
198.12	44.80	285.29	2,255.57	2,375.79	120.22	.....	1921-22
433.24	65.30	637.62	4,028.40	3,853.34	.....	175.06	1920-21
4,410.39	1,270.30	5,751.64	41,809.96	45,832.51	4,022.55	.....	1920-21
151.09	10.60	219.96	1,270.95	955.50	.....	315.45	1920-21
1,341.62	134.10	.....	9,694.54	6,438.80	.....	3,255.74	.....
693.66	76.90	.....	5,051.49	4,569.50	.....	481.99	.....
297.50	90.40	451.71	3,192.36	4,493.30	1,300.94	.....	1920-21
938.49	180.50	1,351.43	9,326.39	11,735.29	2,408.90	.....	1921-22
925.28	191.40	.....	7,385.85	11,065.10	3,679.25	.....	.....
1,174.14	188.40	1,474.48	10,728.92	12,244.39	1,515.47	.....	1920-21
4,998.78	1,452.40	7,198.23	48,242.31	55,586.62	7,344.31	.....	1921-22
80.40	9.20	.....	588.08	431.97	.....	156.11	.....
633.76	65.30	.....	4,562.28	3,916.50	.....	645.78	.....
639.89	144.60	1,198.33	6,832.47	7,231.97	399.50	.....	1920-21
530.55	45.30	.....	3,656.44	4,074.75	418.31	.....	.....
699.32	108.80	.....	5,364.06	4,353.55	.....	1,010.51	.....
2,138.79	263.50	.....	15,165.76	11,855.23	.....	3,310.53	.....
52.80	.80	29.81	226.22	247.38	21.16	.....	1921-22
40.67	1.10	25.64	182.64	183.77	1.13	.....	1921-22
24,366.81	5,230.10	24,269.80	218,774.13	242,352.59	32,929.63	9,351.17	.....
744.49	143.50	1,072.06	7,767.69	7,104.25	.....	*663.44	.....
.....
25,111.30	5,373.60	25,341.86	226,541.82	249,456.84	.....	.....	.....

*Transferred to debit of Contingency Reserve.

EUGENIA SYSTEM

Reserve for Contingencies Account, 31st October, 1922

Total provision for Contingencies to 31st October, 1921.....	\$12,079.58
Amount added on account of reduction in Cost of Power to Sundry Companies due to reduction in depreciation rate from commencement of operations.....	13,643 72
	<u>\$25,723.30</u>
Deduct on account of adjustment re unused circuit on Durham—Mount Forest Line.....	11,507 77
Balance brought forward 31st October, 1921.....	<u>\$14,215.53</u>
Added during the year ending 31st October, 1922:	
Amounts charged to Municipalities as part of the Cost of Power delivered to them.....	\$5,230.10
Provision against equipment employed in respect of contracts with Sundry Companies.....	143.50
Interest at 4% per annum on monthly balances to the credit of the account.....	568.62
	<u>5,942.22</u>
	20,157.75
Deduct:	
Expenditures during the year ending 31st October, 1922.....	\$6,692.93
Net loss for year on power sold to Sundry Power Customers.....	663.44
	<u>7,356.37</u>
Balance carried forward 31st October, 1922.....	<u>\$12,801.38</u>

EUGENIA SYSTEM

Reserve for Renewals Account, 31st October, 1922

Total provision for Renewals to 31st October, 1921		\$188,154.25
Less reduction upon adjustment of Renewals Rate	\$68,106.98	
Less renewals provided for Durham—Mt. Forest Line	829.83	
		<u>68,936.81</u>
		\$119,217.44
Deduct expenditures to 31st October, 1921		<u>6,324.04</u>
		\$112,893.40
Added during the year ending 31st October, 1922:		
Balance brought forward, 31st October, 1921		
Amounts charged to Municipalities as part of the Cost of Power delivered to them	\$24,366.81	
Provision against equipment employed in respect of contracts with Sundry Companies	744.49	
Interest at 4% per annum on monthly balances to the credit of the account	4,515.74	
Renewals reserve provided on second-hand equipment purchased	349.60	
		<u>29,976.64</u>
		\$142,870.04
Expenditures during the year ending 31st October, 1922		<u>5,669.35</u>
Balance carried forward, 31st October, 1922		<u>\$137,200.69</u>

EUGENIA

Statement Showing the Total Sinking Fund Requirements to be Met by Each Municipality under Section 23 of the Act, Sinking Fund Payments made the Total of such Sinking Fund Payments including

Municipality	Total Sinking Fund requirements chargeable to the municipality under the Act		Sinking Fund requirements the payment of which has been deferred	
	(a) For period of	(b) Amount	(a) For period of	(b) Amount
		\$ c.		\$ c.
Arthur.....	2 yrs. ending 31 Oct., 1922	3,074.37	1 yr. ending 31 Oct., 1922	1,434.33
Chatsworth.....	2 " " " 1922	433.69		
Chesley.....	2 " " " 1922	3,590.52	1 yr. ending 31 Oct., 1922	1,812.99
Dundalk.....	2 " " " 1922	1,049.10		
Durham.....	2 " " " 1922	2,627.34		
Elmwood.....	2 " " " 1922	646.82	2 yrs. ending 31 Oct., 1922	646.82
Flesherton.....	2 " " " 1922	600.71		
Grand Valley.....	2 " " " 1922	1,261.48	1 yr. ending 31 Oct., 1922	623.86
Hanover.....	2 " " " 1922	12,102.60	1 " " " 1922	6,350.96
Holstein.....	2 " " " 1922	437.53	1 " " " 1922	217.57
Kincardine.....	2 " " " 1922	2,989.28	2 " " " 1922	2,989.28
Lucknow.....	2 " " " 1922	1,653.71	2 " " " 1922	1,653.71
Markdale.....	2 " " " 1922	880.11	1 " " " 1922	428.40
Mount Forest.....	2 " " " 1922	2,844.46		
Neustadt.....	2 " " " 1922	2,403.28	2 yrs. ending 31 Oct., 1922	2,403.28
Orangeville.....	2 " " " 1922	3,165.24	1 " " " 1922	1,690.76
Owen Sound.....	2 " " " 1922	14,969.76		
Priceville.....	2 " " " 1922	183.51	2 yrs. ending 31 Oct., 1921	183.51
Ripley.....	2 " " " 1922	1,589.54	2 " " " 1921	1,589.54
Shelburne.....	2 " " " 1922	2,119.77	1 " " " 1921	921.44
Tara.....	2 " " " 1922	1,507.87	2 " " " 1921	1,507.87
Teeswater.....	2 " " " 1922	1,659.58	2 " " " 1921	1,659.58
Wingham.....	2 " " " 1922	6,233.93	2 " " " 1921	6,233.93
Flesherton.....	1 " " " 1922	29.81		
Rural Power District				
Walkerton				
Quarry.....	1 " " " 1922	25.64		
Rural Power District				
Totals—Municipalities.....		68,079.65		32,347.83
Totals—Companies (from commencement of operation).....		2,606.02		
Grand Totals.....		70,685.67		32,347.83

SYSTEM

cipality, Sinking Fund Requirements the Payment of which has been Deferred by
by Certain Municipalities which have been Operating more than Five Years, and
Interest allowed thereon to 31st October, 1922

Sinking Fund requirements paid (or charged) as part of the cost of power		Interest at 4% per annum allowed on Sinking Fund requirements which have been paid	Total Sinking Fund payments and accumulated interest to the credit of the municipality on 31st October, 1922
(a) For period of	(b) Amount		
	\$ c.	\$ c.	\$ c.
1 year ending 31 Oct., 1921	1,640.04		1,640.04
2 years ending " 1922	433.69	8.32	442.01
1 " " " 1921	1,777.53		1,777.53
2 " " " 1922	1,049.10	22.70	1,071.80
2 " " " 1922	2,627.34	44.26	2,671.60
2 years ending " 1922	600.71	12.62	613.33
1 " " " 1921	637.62		637.62
1 " " " 1921	5,751.64		5,751.64
1 " " " 1921	219.96		219.96
1 year ending " 1921	451.71		451.71
2 years ending " 1922	2,844.46	59.72	2,904.18
1 year ending " 1921	1,474.48		1,474.48
2 " " " 1922	14,969.76	310.86	15,280.62
1 year ending " 1921	1,198.33		1,198.33
1 year ending " 1922	29.81		29.81
1 " " " 1922	25.64		25.64
(From commencement of operation)	35,731.82	458.48	36,190.30
	2,606.02	61.36	2,667.38
	38,337.84	519.84	38,857.68

EUGENIA

Statement Showing the Net Credit or Charge to each Municipality in respect of Power added during the Year—also the Net Amount Credited or Charged to each Muni the Accumulated Amount Standing as a Credit or Charge

Municipality	Date commenced operating	Net Credit or Charge at 31st October, 1921		Amounts Credited upon adjustment of renewals reserve
		Credit	Charge	Credited
		\$ c.	\$ c.	\$ c.
Arthur.....	Dec., 1916		9,515.86	4,158.15
Chatsworth.....	Dec., 1915		1,831.64	544.02
Chesley.....	July, 1916		6,654.73	4,465.09
Dundalk.....	Dec., 1915		3,908.57	1,272.55
Durham.....	Dec., 1915		1,502.80	1,516.58
Elmwood.....	Apr., 1918		915.27	643.89
Flesherton.....	Dec., 1915		2,943.43	711.60
Grand Valley.....	Dec., 1916		2,063.88	1,509.61
Hanover.....	Sept., 1916	2,758.90		6,075.47
Holstein.....	May, 1916		4,640.44	926.49
Kincardine.....	Mar., 1921		3,855.59	770.79
Lucknow.....	Jan., 1921		1,577.19	470.95
Markdale.....	Mar., 1916		627.69	713.47
Mount Forest.....	Dec., 1915		17,615.48	5,428.01
Neustadt.....	Dec., 1918		2,098.61	1,312.27
Orangeville.....	July, 1916		8,649.64	3,578.09
Owen Sound.....	Dec., 1915		16,210.28	13,156.27
Priceville.....	Mar., 1921		280.55	48.64
Ripley.....	Jan., 1921		1,814.45	490.48
Shelburne.....	July, 1916		3,313.73	2,292.66
Tara.....	Feb., 1918		6,063.87	1,861.88
Teeswater.....	Dec., 1920		1,817.13	428.92
Wingham.....	Dec., 1920		5,576.72	2,087.38
Flesherton R.P.D.....				
Walkerton R.P.D.....				
		2,758.90	103,477.55	54,463.26

SYSTEM

Supplied to it to 31st October, 1921, the Cash Receipts, Adjustments made and interest cipality in respect of Power Supplied in the Year Ending 31st October, 1922, and to each Municipality at 31st October, 1922

Cash receipts and payments on account of such Credits and Charges, also adjustments made during the year		Interest at 4% per annum added during the year		Net amount Credited or Charged in respect of power supplied in the year ending 31st October, 1922		Accumulated amount standing as a Credit or Charge on 31st October, 1922	
Credited	Charged	Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
			214.30	347.78			5,224.23
752.28			32.52	959.48		391.62	
			87.58	2,491.52		214.30	
2,000.00			57.11	1,436.59		743.46	
			.52	6,244.54		6,258.84	
			10.85	217.98			64.25
302.94			81.24	120.22			1,889.91
2,063.88		38.87			175.06	1,373.42	
	2,758.90	300.72		4,022.55		10,398.74	
			148.56		315.45		4,177.96
			123.39		3,255.74		6,463.93
1,629.76			33.73		481.99	7.80	
		3.43		1,300.94		1,390.15	
4,566.29			324.22	2,408.90			5,536.50
			31.45	3,679.25		2,861.46	
			202.86	1,515.47			3,758.94
			122.16	7,344.31		4,168.14	
252.44			4.23		156.11		139.81
1,814.45			12.99		645.78		168.29
150.68			38.10	399.50			508.99
			168.07	418.31			3,951.75
1,817.13			29.04		1,010.51		610.63
5,576.72			43.62		3,310.53		1,266.77
				21.16		21.16	
				1.13		1.13	
20,926.57	2,758.90	343.54	1,766.02	32,929.63	9,351.17	27,830.22	33,761.96

EUGENIA SYSTEM
Operating Account for Year

Interest on Capital Investment.....	\$124.88
Provision for Sinking Fund.....	39.68
	<u>\$164.56</u>

Statement Showing Interest and Sinking Fund Charges on each line for the Year
Ending 31st October, 1922

	Capital Cost	Interest	Sinking Fund	Total interest and sinking fund charges	Revenue from municipalities
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Flesherton.....	852.58	52.86	15.36	68.22	68.22
Markdale.....	1,241.33	66.04	22.36	88.40	88.40
Ripley.....	145.16	5.98	1.96	7.94	7.94
Totals.....	2,239.07	124.88	39.68	164.56	164.56

WASDELLS
Operating Account for Year

COSTS OF OPERATION AS PROVIDED FOR UNDER SECTIONS 6C AND 23 OF THE ACT.

Costs of operating and maintaining the Generating Plant, Trans- mission Lines, Stations, etc., including the proportion of Administrative Expenses chargeable to the operation of this System.....	\$17,351.47
Interest on Capital Investment.....	13,485.31
Provision for Renewal of Generating Plant, Lines and Stations, etc.....	4,933.65
Provision for Contingencies:	
By charges against Municipalities.....	\$374.00
By charges against contracts with Private Company and Severn System which purchased power.....	581.70
	<u>955.70</u>
Provision for Sinking Fund:	
By charges against Municipalities.....	\$2,534.54
By charges against contracts with Private Company and Severn System which purchased power.....	2,986.59
	<u>5,521.13</u>
	<u>\$42,247.26</u>

RURAL LINES

Ending 31st October, 1922

REVENUE:
Interest and Sinking Fund collected from the Municipalities which operate lines. \$164.56

\$164.56

Statement Showing the total Sinking Fund Requirements of each Municipality, and the total of the Sinking Fund Payments with Interest allowed thereon to 31st October, 1922

	Sinking Fund requirements		Interest at 4% per annum allowed on Sinking Fund payments	Total Sinking Fund payments and accumulated interest to 31st October, 1922
	Period covered	Amount		
		\$ c.	\$ c.	\$ c.
Flesherton....	5 years ending 31 Oct., 1922	55.00	1.59	56.59
Markdale.....	6 " " " 1922	127.43	4.20	131.63
Ripley.....	¾ " " " 1922	1.96	.....	1.96
Totals.....	.....	184.39	5.79	190.18

SYSTEM

Ending 31st October, 1922

REVENUE FOR PERIOD

Collected from Municipalities.....	\$26,707.82
Power sold to Private Company and to Severn System.....	20,827.97
	<u>\$47,535.79</u>
Add: Amounts due by certain Municipalities, being the difference between the sums paid and the cost of power supplied to them in the period.....	\$61.51
Deduct: Amounts collected by certain Municipalities in excess of the sums required to be paid by them for power supplied in the period.....	5,768.27
	<u>5,706.76</u>
Revenue.....	\$41,829.03
Loss on Sale of Power supplied to Private Company (written off to Contingency Reserve).....	418.23
	<u>\$42,247.26</u>

WASDELLS

Statement Showing the Amount to be Paid by Each Municipality as the Cost—Under Received by the Commission from Each Municipality on Account of such Cost, upon Ascertainment (by Annual Adjustment) of the Actual Cost of

Municipality	Interim Rates per Horsepower collected by Commission during year		Share of Capital Cost of system on which interest and fixed charges are payable	Average Horse-power supplied in year after correction for power factor	Share of Operating	
					Operating Maintenance and Administrative Expenses	Interest
	To Dec. 21, 1921	To Oct. 31, 1922				
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.
Beaverton.....	60.00	65.00	34,437.46	112.2	2,633.86	1,406.80
Brechin.....	90.00	90.00	22,406.29	35.4	978.26	917.03
Cannington.....	65.00	65.00	28,284.17	77.5	1,659.36	1,156.11
Kirkfield.....	60.00	60.00	13,242.96	26.6	524.56	541.74
Port Perry.....		90.00	26,693.35	6.7	409.78	171.26
Sunderland.....	85.00	85.00	26,292.70	47.1	1,044.19	1,086.40
Uxbridge.....		90.00	31,620.99	7.4	401.42	196.43
Woodville.....	80.00	80.00	29,502.05	61.1	1,313.73	1,206.77
Totals—Municipalities.....			212,479.97	374.	8,965.16	6,682.54
Totals—Companies and Severn System....			166,571.39	581.7	8,386.31	6,802.77
Grand Totals.....			379,051.36	955.7	17,351.47	13,485.31

WASDELLS SYSTEM

Reserve for Contingencies Account, 31st October, 1922

Balance brought forward 31st October, 1921.....	\$240.64
Amount added on account of reduction in Cost of Power to Sundry Companies, due to reduction in depreciation rate from commencement of operations.....	5,077.30
Added during the year ending 31st October, 1922:	
Amounts charged to Municipalities as part of the Cost of Power delivered to them.....	\$374.00
Provision against equipment employed in respect of contracts with Sundry Companies.....	581.70
Interest at 4% per annum on monthly balances to the credit of the account.....	212.72
	<u>1,168.42</u>
	\$6,486.36
Deduct:	
Loss for the year on power sold to Private Company.....	418.23
Balance carried forward, 31st October, 1922.....	<u>\$6,068.13</u>

SYSTEM

Section 23 of the Act—of Power Supplied to it by the Commission. The Amount—and the Amount Remaining to be Credited or Charged to Each Municipality Power Supplied to it in the Year Ending 31st October, 1922

Costs and Fixed Charges			Total Cost of Power for year as provided to be paid under section 23 of Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual Cost of Power by annual adjustment		Sinking Fund for the years mentioned hereunder charged as part of the Cost of Power in the year 1921-1922
Renewals	Contingencies	Sinking Fund			Credited	Charged	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
514.68	112.20	617.61	5,285.15	7,076.31	1,791.16	.....	1921-22
335.50	35.40	402.60	2,668.79	3,191.46	522.67	.....	1921-22
422.97	77.50	507.57	3,823.51	5,039.10	1,215.59	.....	1921-22
198.19	26.60	.....	1,291.09	1,597.00	305.91	.....	.....
62.66	6.70	.....	650.40	603.00	.....	47.40	.....
397.46	47.10	476.96	3,052.11	4,005.95	953.84	.....	1921-22
71.86	7.40	.....	677.11	663.00	.....	14.11	.....
441.50	61.10	529.80	3,552.90	4,532.00	979.10	.....	1921-22
2,444.82	374.00	2,534.54	21,001.06	26,707.82	5,768.27	61.51	
2,488.83	581.70	2,986.59	21,246.20	20,827.97	.....	418.23 *	
4,933.65	955.70	5,521.13	42,247.26	47,535.79	.....	

*Transferred to Debit of Contingency Reserve.

WASDELLS SYSTEM

Reserve for Renewals Account, 31st October, 1922

Total provision for renewals to 31st October, 1921.....	\$42,116.91
Less reduction upon adjustment of Renewal Rates.....	10,578.06
	\$31,538.85
Deduct:	
Expenditures to 31st October, 1921.....	3,143.18
Balance brought forward, 31st October, 1921.....	\$28,395.67
Added during the year ending 31st October, 1922:	
Amounts charged to Municipalities as part of the Cost of Power delivered to them.....	\$2,444.82
Provision against equipment employed in respect of contracts with Sundry Companies.....	2,488.83
Interest at 4% per annum on monthly balances to the credit of the account.....	1,135.83
Renewals reserve provided on second-hand equipment purchased....	1,296.53
	7,366.01
	\$35,761.68
Expenditures during the year ending October 31, 1922.....	197.56
Balance carried forward, 31st October, 1922.....	\$35,564.12

WASDELLS

Statement Showing the Total Sinking Fund Requirements to be Met by Each Muni Commission under Section 23 of the Act.—Sinking Fund Payments made the. Total of such Sinking Fund Payments,

Municipality	Total Sinking Fund requirements chargeable to the municipality under the Act		Sinking Fund requirements the payment of which has been deferred	
	(a) For period of	(b) Amount	(a) For period of	(b) Amount
		\$ c.		\$ c.
Beaverton.....	3 yrs. ending 31 Oct. 1922	1,845.03		
Brechin.....	3 " " " 1922	1,243.36		
Cannington.....	3 " " " 1922	1,604.10		
Kirkfield.....	3 " " " 1922	429.05	3 yrs. ending 31 Oct. 1922	429.05
Port Perry.....	1 " " " 1922	75.19	1 " " " 1922	75.19
Sunderland.....	3 " " " 1922	1,499.41		
Uxbridge.....	1 " " " 1922	86.23	1 yr. ending 31 Oct. 1922	86.23
Woodville.....	3 " " " 1922	1,528.66		
Totals—Municipalities		8,311.03		590.47
Totals—Companies (from commencement of operations)		8,758.22		
Grand Totals		17,069.25		590.47

WASDELLS

Statement Showing the Net Charge to Each Municipality in Respect of Power Supplied During the Year. Also the Net Amount Credited or Charged to each Muni and the Accumulated Amount Standing

Municipality	Date commenced operating	Net Charge at 31st October, 1921	Amounts Credited upon adjustments of renewals reserve	Cash Receipts on account of such charges during the year
			Credited	Credited
		\$ c.	\$ c.	\$ c.
Beaverton....	Nov., 1914	4,751.99	1,238.52	3,500.00
Brechin....	Jan., 1915	3,680.19	804.56	
Cannington...	Nov., 1914	3,645.65	1,318.20	
Kirkfield....	June, 1920	307.02	53.65	
Port Perry...	Sept., 1922			
Sunderland...	Nov., 1914	3,587.46	992.64	
Uxbridge....	Sept., 1922			
Woodville....	Nov., 1914	3,145.08	1,093.19	
Totals.....		19,117.39	5,500.76	3,500.00

SYSTEM

cipality, Sinking Fund Requirements, the Payment of which has been Deferred by the by Certain Municipalities which have been Operating more than Five Years, and including Interest allowed thereon, to 31st October, 1922.

Sinking Fund requirements paid (or charged) as part of the cost of power		Interest at 4% per annum allowed on Sinking Fund requirements which have been paid	Total Sinking Fund payments and accumulated Interest to the credit of the municipality on 31st October, 1922
(a) For period of	(b) Amount		
3 years ending 31 Oct., 1922.....	\$ c. 1,845.03	\$ c. 75.60	\$ c. 1,920.63
3 " " " 1922	1,243.36	51.05	1,294.41
3 " " " 1922	1,604.10	68.75	1,672.85
.....			
3 years endng 31 Oct., 1922.....	1,499.41	62.50	1,561.91
3 years ending 31 Oct., 1922.....	1,528.66	60.04	1,588.70
	7,720.56	317.94	8,038.50
(From commencement of operations)	8,758.22	340.70	9,098.92
	16,478.78	658.64	17,137.42

SYSTEM

to it to 31st October, 1921, the Cash Receipts, Adjustments made and Interest Added cipality in Respect of Power Supplied in the Year ending 31st October, 1922, as a Credit or Charge to Each Municipality at 31st October, 1922.

Interest at 4% per annum added during the year	Net amount Credited or Charged in respect of power supplied in the year ending 31st October, 1922		Accumulated amount standing as a Credit or Charge on 31st October, 1922		
Charged	Credited		Charged	Credited	Charged
\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
137.85	1,791.16		.....	1,639.84	.....
115.03	522.67		.....	.....	2,467.99
93.10	1,215.59		.....	.....	1,204.96
10.13	305.91		.....	42.41	.....
.....	.....		47.40	.....	47.40
103.80	953.84		.....	.....	1,744.78
.....	.....		14.11	.....	14.11
82.07	979.10		.....	.....	1,154.86
541.98	5,768.27		61.51	1,682.25	6,634.10

WASDELLS SYSTEM

Operating

For Year Ending

Interest on Capital Investment.....	\$837.52
Provision for Sinking Fund.....	249.38
	<u>\$1,086.90</u>

Statement showing Interest and
For the year ending

	Capital Cost	Interest
	\$ c.	\$ c.
Beaverton.....	6,139.22	356.38
Brechin.....	613.25	38.02
Brock Twp. (operated by Sunderland) ..	3,903.91	230.77
Cannington.....	1,403.95	38.61
Woodville.....	2,895.62	173.74
	<u>14,955.95</u>	<u>837.52</u>

Statement showing the Total Sinking Fund
and the Total of the Sinking Fund
thereon to

	Sinking Fund requirements	
	Period covered	Amount
		\$ c.
Beaverton.....	5 years ending 31st October, 1922.....	394.59
Brechin.....	4 " " " " 1922.....	56.22
Brock Township (operated by Sunderland).....	4 " " " " 1922.....	269.52
Cannington.....	1/2 " " " " 1922.....	12.63
Woodville.....	3 " " " " 1922.....	127.85
		<u>860.81</u>

MUSKOKA

Operating Account for year

COSTS OF OPERATING AS PROVIDED FOR UNDER SECTIONS 6C AND 23 OF THE ACT

Cost of operating and maintaining the Generating Plant, Transmission Lines, Stations, etc., including the proportion of Administrative Expenses chargeable to the operation of this System.....	\$12,464.62
Interest on Capital Investment.....	9,447.88
Provision for Renewal of Generating Plant, Lines, Stations, etc.....	2,659.87
Provision for Contingencies:	
By charges against Municipalities.....	\$1,342.60
By appropriating the net profits on power sold to Sundry Customers at Muskoka Falls.....	29.71
	<u>1,372.31</u>
Provision for Sinking Fund:	
By charges against Municipalities.....	\$3,738.28
By charges against contracts with Sundry Customers at Muskoka Falls.....	5.13
	<u>3,743.41</u>
	<u>\$29,688.09</u>

RURAL LINES

Account

31st October, 1922

Revenue:	
Interest and Sinking Fund from the Municipalities which operate the line.....	\$1,086.90
	<u>\$1,086.90</u>

Sinking Fund Charges on each Line

31st October, 1922

Sinking Fund	Total Interest and Sinking Fund Charges	Revenue from municipalities
\$ c.	\$ c.	\$ c.
103.85	460.23	460.23
11.04	49.06	49.06
69.74	300.51	300.51
12.63	51.24	51.24
52.12	225.86	225.86
<u>249.38</u>	<u>1,086.90</u>	<u>1,086.90</u>

requirements in respect of each Line

Payments with Interest allowed

31st October, 1922

Sinking Fund paid	Interest at 4% per annum allowed on Sinking Fund payments	Total Sinking Fund payments and accumulated interest to 31st October, 1922
\$ c.	\$ c.	\$ c.
394.59	11.63	406.22
56.22	1.81	58.03
269.52	7.99	277.51
12.63	.....	12.63
127.85	3.03	130.88
<u>860.81</u>	<u>24.46</u>	<u>885.27</u>

SYSTEM

ending 31st October, 1922

REVENUE FOR PERIOD

Collected from Municipalities.....	\$31,465.72
Power sold to Sundry Customers at Muskoka Falls.....	\$51.00
	<u>\$31,516.72</u>
Deduct amounts collected from Municipalities in excess of the sums required to be paid by them for power supplied in the period.....	<u>1,828.63</u>

Revenue.....	<u>\$29,688.09</u>
	<u>\$29,688.09</u>

MUSKOKA

**Statement Showing the Amount to be Paid by Each Municipality as the Cost—
Received by the Commission from Each Municipality on Account of such
Ascertainment (by Annual Adjustment) of the Actual Cost**

Municipality	Interim Rates per Horsepower collected by Commission during year		Share of Capital Cost of system on which interest and fixed charges are payable	Average Horsepower supplied in year after correction for power factor	Share of Operating	
	To Dec. 31, 1921	To Oct. 31, 1922			Operating Maintenance and Administrative Expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.
Gravenhurst.....	15.00	20.00	37,135.97	361.9	3,231.26	1,648.83
Huntsville.....	25.00	25.00	175,370.84	980.7	9,233.36	7,786.44
Totals—Municipalities.....			212,506.81	1,342.6	12,464.62	9,435.27
Muskoka Falls— (Sundry Customers).....			284.01			12.61
Grand Totals			212,790.82	1,342.6	12,464.62	9,447.88

MUSKOKA SYSTEM

Reserve for Contingencies Account, 31st October, 1922

Balance brought forward, 31st October, 1921.....	\$1,911.14
Amount added on account of reduction in Cost of Power to Sundry Companies due to reduction in depreciation rate from commencement of operations.....	15.07
Added during the year ending 31st October, 1922:	
Amounts charged to Municipalities as part of the Cost of Power delivered to them.....	\$1,342.60
Net profits from contracts with Sundry Power Customers.....	29.71
Interest at 4% per annum on monthly balances at the credit of the account.....	77.05
	<u>\$1,449.36</u>
Balance carried forward, 31st October, 1922.....	<u>\$3,375.57</u>

SYSTEM

under Section 23 of the Act—of Power supplied to it by the Commission, the amount Cost, and the Amount Credited or Charged to Each Municipality upon of Power supplied to it in the Year Ending 31st October, 1922

Cost and Fixed Charges.			Total Cost of Power for year as provided to be paid under section 23 of Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment		Sinking Fund for the years mentioned hereunder charged as part of the cost of power in the year 1921-22
Renewals	Contingencies	Sinking Fund			Credited	Charged	
\$ c. 464.20	\$ c. 361.90	\$ c. 668.44	\$ c. 6,374.63	\$ c. 6,949.31	\$ c. 574.68	\$ c.	1921-22
2,192.12	980.70	3,069.84	23,262.46	24,516.41	1,253.95	.....	1920-21
2,656.32	1,342.60	3,738.28	29,637.09	31,465.72	1,828.63	.....	.....
3.55	.....	5.13	21.29	51.00	29.71	*	1921-22
2,659.87	1,342.60	3,743.41	29,658.38	31,516.72	.....	.....	.....

*Transferred to Credit of Contingency Reserve.

MUSKOKA SYSTEM

Reserve for Renewals Account, 31st October, 1922

Total provision for Renewals to 31st October, 1921.....	\$26,651.51	
Less reduction upon adjustment of Renewal Rates.....	13,398.99	\$13,252.52
Deduct expenditures to 31st October, 1921.....		1,180.12
Balance brought forward, 31st October, 1921.....		\$12,072.40
Added during the year ending 31st October, 1922:		
Amount charged to Municipalities as part of the Cost of Power delivered to them.....	\$2,656.32	
Provision against equipment employed in respect of contracts with Sundry Companies.....	3.55	
Interest at 4% per annum on monthly balances to the credit of the account.....	482.90	3,142.77
Balance carried forward, 13st October, 1922.....		\$15,215.17

MUSKOKA

Statement showing the Total Sinking Fund Requirements to be met by each Municipi Commission under Section 23 of the Act—Sinking Fund Payments Made by the Total of such Sinking Fund Payments, including

Municipality	Total Sinking Fund requirements chargeable to the municipality under the Act		Sinking Fund the payment has been
	(a) For period of	(b) Amount	(a) For period of
		\$ c.	
Gravenhurst.....	2 years ending 31 Oct., 1922	1,419.04	.....
Huntsville.....	2 " " "	6,226.49	1 year ending 31 Oct., 1922
Totals, Municipalities.....		7,645.53	
Totals—Companies (From commencement of operations).....		5.13	
Grand Totals.....		7,650.66	

MUSKOKA

Statement Showing the Net Credit or Charge to each Municipality in Respect of Made and Interest added during the Year—also the Net Amount Credited October, 1922—and the Accumulated Amount Standing as a

Municipality	Date commenced operating	Net Credit or Charge at 31st October, 1921		Amounts Credited upon adjust-ment of renewals reserve	Cash payments and adjustments on account of such Credits and Charges during the year
		Credit	Charge	Credited	Charged
Gravenhurst.....	Nov. 1915	\$ c.	\$ c. 6,272.07	\$ c. 2,694.62	\$ c. 638.29
Huntsville.....	Sept. 1916	1,290.35	.....	10,689.30	2,152.06
Totals.....		1,290.35	6,272.07	13,383.92	2,790.35

SYSTEM

pality—Sinking Fund Requirements the Payment of which has been Deferred by the Certain Municipalities Which Have Been Operating more than Five Years—And Interest Allowed Thereon to 31st October, 1922.

requirements of which deferred	Sinking Fund requirements paid (or charged) as part of the cost of power	Interest at 4% per annum allowed on Sinking Fund requirements which have been paid	Total Sinking Fund payments to the credit of the municipality on 31st October, 1921
(b) Amount	(a) For period of	(b) Amount	
\$ c.		\$ c.	\$ c.
.....	2 years ending 31 Oct., 1922	1,419.04	30.02
3,156.65	1 " " " 1921	3,069.84	.....
3,156.65	(From commencement of operations).....	4,488.88	30.02
		5.13	.....
3,156.65		4,494.01	30.02

SYSTEM

Power supplied to it at 31st October, 1921—The Cash Payments—Adjustments to each Municipality in Respect of Power Supplied in the Year Ending 31st October, 1922.

Interest at 4% per annum added during the year		Net amount credited in respect of power supplied in the year ending 31st October, 1922	Accumulated amount standing as a Credit or Charge on 31st October, 1922	
Credited	Charged	Credited	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	143.09	574.68	.....	3,784.15
453.02	.....	1,253.95	11,534.56	.....
453.02	143.09	1,828.63	11,534.56	3,784.15

ST. LAWRENCE

Operating Account for Year

COSTS OF OPERATION AS PROVIDED FOR UNDER SECTIONS 6C AND 23 OF THE ACT.

Power Purchased.....	\$56,931.81
Costs of operating and maintaining the Generating Plant, Transmission Lines, Stations, etc., including the proportion of Administrative Expenses chargeable to the operation of this System.....	23,688.52
Interest on Capital Investment.....	40,618.46
Provision for Renewal of Lines, Stations, etc.....	16,951.72
Provision for Contingencies:	
By charges against Municipalities.....	\$1,924.00
By charges against contracts with Private Companies.....	1,792.50
	3,716.50
Provision for Sinking Fund:	
By charges against Municipalities.....	\$8,222.15
By charges against contracts with Private Companies which purchased power.....	3,447.44
	11,669.59
	\$153,576.60

ST. LAWRENCE

Statement Showing the Amount to be Paid by Each Municipality as the Cost—Under Received by the Commission from Each Municipality on Account of Such Cost upon ascertainment (by Annual Adjustment) of the Actual

Municipality	Interim Rates per Horsepower collected by Commission during year		Share of Capital Cost of system on which interest and fixed charges are payable	Average Horse-power supplied in year after correction for power factor	Cost of Power to Commission	Share of Operating	
	To, Dec. 31, 1921	To Oct. 31, 1922				Operating Maintenance and Administrative Expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
Alexandria..	65.00	80.00	115,671.74	154.9	2,372.86	2,758.89	5,452.41
Apple Hill...	60.00	85.00	11,254.04	19.4	297.18	388.07	527.18
Brockville...	55.00	55.00	288,408.66	1,153.6	17,671.62	7,723.08	12,419.50
Chesterville..	85.00	85.00	68,995.70	143.8	2,202.82	1,496.27	2,994.12
Lancaster...	97.00	97.00	37,607.89	21.1	323.22	969.12	1,818.92
Martintown..	54.00	85.00	6,374.86	11.9	182.29	184.27	297.43
Maxville....	86.00	86.00	41,399.16	38.4	588.24	815.46	1,982.45
Prescott....	55.00	52.00	59,946.22	227.8	3,489.59	2,109.57	2,325.97
Williamsburg	73.00	95.00	8,156.48	17.8	272.67	307.58	347.53
Winchester..	85.00	85.00	34,960.72	87.9	1,346.51	901.76	1,455.12
Brockville Rural Power Districts..			19,166.42	36.	551.48	539.87	777.78
Chesterville Rural Power Districts			4,309.12	2.7	41.36	325.13	137.91
Martintown Rural Power Districts			9,048.48	5.5	84.25	282.68	408.08
Prescott Rural Power Districts...			16,199.02	3.2	49.02	376.71	270.19
Totals—Municipalities.....			721,498.41	1,924.	29,473.11	19,178.46	31,214.59
Totals—Companies.....			241,784.98	1,792.5	27,458.71	4,510.06	9,403.87
Now Operating Capital.....			71,978.69				
Grand Totals.....			1,035,262.08	3,716.5	56,931.82	23,688.52	40,618.46

SYSTEM

Ending 31st October, 1922

REVENUE FOR PERIOD

Collected from Municipalities.....	\$121,488.45
Power sold to Private Companies.....	48,620.11
	<hr/>
	\$170,108.56
Add amounts due by certain Municipalities, being the difference between sums paid and the Costs of Power supplied to them in the year.....	\$4,671.37
Deduct amounts collected from certain Municipalities in excess of the sums required to be paid by them for power supplied in the year.....	23,026.25
	<hr/>
	18,354.88
Revenue.....	\$151,753.68
Loss on Sale of Power supplied to Private Companies (written off against Contingency Reserve).....	1,822.93
	<hr/>
	\$153,576.61

SYSTEM

Section 23 of the Act—of Power Supplied to it by the Commission—The Amount and the Amount remaining to be Credited or Charged to Each Municipality
Cost of Power Supplied to it in the Year Ending 31st October, 1922

Costs and Fixed Charges			Total Cost of Power for year as provided to be paid under section 23 of Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual Cost of Power by annual adjustment		Sinking Fund for the years mentioned hereunder charged as part of the Cost of Power in the year 1921-22
Renewals	Contingencies	Sinking Fund			Credited	Charged	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
2,220.94	154.90	.....	12,960.00	12,056.79	.....	903.21	.....
214.74	19.40	.....	1,446.57	1,458.70	12.13	.....	.....
5,058.85	1,153.60	5,052.58	49,079.23	63,456.27	14,377.04	.....	1921
1,219.60	143.80	1,097.65	9,154.26	12,227.27	3,073.01	.....	1922
740.92	21.10	.....	3,873.28	2,041.80	.....	1,831.48	.....
121.16	11.90	.....	797.05	948.19	151.14	.....	.....
807.52	38.40	.....	4,232.07	3,301.67	.....	930.40	.....
947.45	227.80	852.70	9,953.08	11,983.27	2,030.19	.....	1922
141.56	17.80	101.43	1,188.57	884.29	.....	304.28	1921
592.72	87.90	533.45	4,917.46	7,467.22	2,549.76	.....	1922
474.40	36.00	285.13	2,664.66	3,443.02	778.36	.....	1922
89.45	2.70	50.56	647.11	523.27	.....	123.84	1922
285.14	5.50	149.60	1,215.25	637.09	.....	578.16	1922
206.81	3.20	99.05	1,004.98	1,059.60	54.62	.....	1922
13,121.26	1,924.00	8,222.15	103,133.57	121,488.45	23,026.25	4,671.37	.....
3,830.46	1,792.50	3,447.44	50,443.04	48,620.11	.....	1,822.93*	.....
.....
16,951.72	3,716.50	11,669.59	153,576.61	170,108.56	.....	.....	.....

NOTE.—*Transferred to Debit of Contingency Reserve.

ST. LAWRENCE SYSTEM

Reserve For Contingencies Account, 31st October, 1922

Balance brought forward, 31st October, 1921.....	\$3,372.65
Amount added on account of reduction in Cost of Power to Sundry Companies due to reduction in depreciation rate from commencement of operations.....	2,831.77
Added during the year ending 31st October, 1922:	
Amounts charged to Municipalities as part of the Cost of Power delivered to them.....	\$1,924.00
Provision against equipment employed in respect of contracts with Sundry Companies, \$1,792.50 and \$500.00....	2,292.50
Interest at 4% per annum on monthly balances to the credit of the account.....	248.18
	4,464.68
	\$10,669.10
Deduct:	
Expenditures during the year ending, 31st October, 1922.....	\$2,591.00
Net loss for year on power sold to Sundry Power Customers....	1,822.93
	4,413.93
Balance carried forward, 31st October, 1922.....	\$6,255.17

ST. LAWRENCE

Statement Showing the Total Sinking Fund Requirements to be met by Each Municipi-
Commission Under Section 23 of the Act—Sinking Fund Payments Made by
and the Total of such Sinking Fund Payments Including Interest

Municipality	Total Sinking Fund requirements chargeable to the municipality under the Act		Sinking Fund requirements the payment of which has been deferred	
	(a) For period of	(b) Amount	(a) For period of	(b) Amount
Alexandria.....	2 years ending 31 Oct. 1922	\$ 3,258.46	2 years ending 31 Oct. 1922	\$ 3,258.46
Apple Hill.....	2 " " " 1922	255.94	2 " " " 1922	255.94
Brockville....	3 " " " 1922	14,575.74	1 " " " 1922	4,552.98
Chesterville....	3 " " " 1922	3,554.01		
Lancaster.....	2 " " " 1922	969.17	2 " " " 1922	969.17
Martintown....	2 " " " 1922	143.64	2 " " " 1922	143.64
Maxville.....	2 " " " 1922	1,157.47	2 " " " 1922	1,157.47
Prescott.....	3 " " " 1922	2,731.71		
Williamsburg... 3	" " " 1922	310.32	1 year ending 31 Oct. 1922	127.40
Winchester....	3 " " " 1922	1,678.78		
Brockville, Rural Power District. 1	" " " 1922	475.69		
Chesterville, Rural Power Dis. 1	" " " 1922	55.11		
Martintown, Rural Power Dis. 1	" " " 1922	149.60		
Prescott, Rural Power District. 1	" " " 1922	99.05		
Total—Municipalities.....		29,414.69		10,465.06
Totals—Companies (From commencement of operations).....		7,926.98		
Grant Totals.....		37,341.67		10,465.06

ST. LAWRENCE SYSTEM

Reserve For Renewals Account, 31st October, 1922

Total provision for Renewals to 31st October, 1921.....	\$79,062.01	
Transferred from Rural Power District balance, 31st October, 1921..	10.12	
	<u>\$79,072.13</u>	
Less reduction upon adjustment of Renewal Rates.....	25,398.57	\$53,673.56
Deduct expenditures to 31st October, 1921.....		<u>2,702.64</u>
Balance brought forward, 31st October, 1921.....		\$50,970.92
Added during the year ending 31st October, 1922:		
Amounts charged to Municipalities as part of the Cost of Power delivered to them.....	\$13,121.26	
Provision against equipment employed in respect of contracts with Sundry Companies.....	3,830.46	
Interest at 4% per annum on monthly balances to the credit of the account.....	<u>2,038.83</u>	18,990.55
		<u>\$69,961.47</u>
Expenditures during the year ending 31st October, 1922.....		<u>5,217.69</u>
Balance carried forward, 31st October, 1922.....		\$64,743.78

SYSTEM

pality—Sinking Fund Requirements, the Payment of which has been Deferred by the Certain Municipalities Which Have Been Operating More Than Five Years—Allowed Thereon to 31st October, 1922

Sinking Fund requirements paid (or Charged) as part of the Cost of Power		Interest at 4% per annum allowed on Sinking Fund requirements which have been paid	Total Sinking Fund payments and accumulated interest to the credit of the municipality 31st October, 1922
(a) For period of	(b) Amount		
	\$ c.	\$ c.	\$ c.
2 years ending 31 Oct., 1921.....	10,022.76	198.81	10,221.57
3 " " " 1922.....	3,554.01	149.50	3,703.51
3 years ending 31 Oct., 1922.....	2,731.71	113.85	2,845.56
2 " " " 1921.....	182.92	3.26	186.18
3 " " " 1922.....	1,678.78	69.14	1,747.92
1 " " " 1922.....	475.69	7.62	483.31
1 " " " 1922.....	55.11	.18	55.29
1 " " " 1922.....	149.60		149.60
1 " " " 1922.....	99.05		99.05
	18,949.63	542.36	19,491.99
(From commencement of operations	7,926.98	258.93	8,185.91
	26,876.61	801.29	27,677.90

ST. LAWRENCE

Statement Showing the Net Credit or Charge to Each Municipality in Respect of Power Added During the Year—also the Net Amount Credited or Charged to each and the Accumulated Amount Standing as a

Municipality	Date commenced operating	Net Charge at 31st October, 1921	Amounts Credited upon adjustments of renewals reserve
			Credited
		\$ c.	\$ c.
Alexandria.....	Jan., 1921	3,490.01	699.78
Apple Hill.....	April, 1921	398.46	34.82
Brockville.....	April, 1915	4,052.08	10,840.41
Chesterville.....	April, 1914	4,618.29	4,083.99
Lancaster.....	May, 1921	1,464.63	167.97
Martintown.....	May, 1921	295.91	19.22
Maxville.....	Feb., 1921	1,778.83	239.28
Prescott.....	Dec., 1913	565.73	3,545.67
Williamsburg.....	April, 1915	566.13	362.84
Winchester.....	Jan., 1914	1,405.67	2,572.82
Brockville Rural Power Districts.....			
Chesterville Rural Power Districts.....		Cr. 64.97	
Martintown Rural Power Districts.....			
Prescott Rural Power District.....			
Totals.....		18,570.77	22,566.80

RIDEAU

Operating Account for Year

COSTS OF OPERATING AS PROVIDED FOR UNDER SECTIONS 6C AND 23 OF THE ACT

Power Purchased.....	\$6,711.83
Costs of operating and maintaining the Generating Plant, Transmission Lines, Stations, etc., including the proportion of Administrative Expenses chargeable to the operation of this System.....	21,047.63
Interest on Capital Investment.....	53,672.99
Provision for Renewal of Generating Plant, Lines, Stations, etc.....	10,756.11
Provision for Contingencies:	
By charges against Municipalities.....	\$2,259.80
By charges against contracts with Private Company, which purchased power.....	358.90
By appropriating the net profits on power sold to Private Company..	3,823.91
	\$98,631.17

SYSTEM

Supplied to it to 31st October, 1921—The Cash Receipts, Adjustments Made and Interest Municipality in Respect of Power Supplied in the Year Ending 31st October, 1922
Credit or Charge to each Municipality at 31st October, 1922

Cash Receipts on account of such charges, also adjustments made, during the Year		Interest at 4% per annum added during the Year		Net amount Credited or Charged in respect of power supplied in the year ending 31st October, 1922		Accumulated amount standing as a Credit or Charge on 31st October, 1922	
Credited	Charged	Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
			111.61		903.21		3,805.05
			14.55	12.13			366.06
	4,377.44	271.54		14,377.04		17,059.47	
	1,070.92		21.37	3,073.01		1,446.42	
			51.87		1,831.48		3,180.01
295.91			4.39	151.14		165.97	
			61.58		930.40		2,531.53
565.73	2,836.37	127.69		2,030.19		2,867.18	
566.13		2.72			304.28	61.28	
617.19	877.56	55.20		2,549.76		3,511.74	
				778.36		778.36	
		2.60			123.84		56.27
					578.16		578.16
				54.62		54.62	
2,044.96	9,162.29	459.75	265.37	23,026.25	4,671.37	25,945.04	10,517.08

SYSTEM

Ending 31st October, 1922

REVENUE FOR PERIOD	
Collected from Municipalities.....	\$101,417.63
Power sold to Private Company.....	15,682.05
	\$117,099.68
Deduct amounts collected from Municipalities in excess of the sums required to be paid by them for power supplied in the period.....	18,468.51
Revenue.....	\$98,631.17
	\$98,631.17

RIDEAU

**Statement Showing the Amount to be Paid by Each Municipality as the Cost—
Received by the Commission from Each Municipality on Account of such
upon Ascertainment (by Annual Adjustment) of the Actual**

Municipality	Interim Rates per Horsepower collected by Commission during year		Share of Capital Cost of system on which interest and fixed charges are payable	Average Horse- power supplied in year after correction for power factor	Cost of Power to Com- mission
	To Dec. 31, 1921	To Oct. 31, 1922			
	\$ c.	\$ c.	\$ c.		\$ c.
Carleton Place.....	44.00	44.00	337,509.25	791.9	2,029.67
Kemptville.....	80.00	80.00	52,512.03	91.7	235.03
Lanark.....	92.50	92.50	23,086.50	32.4	83.04
Perth.....	45.00	45.00	218,790.71	499.	1,278.96
Smiths Falls.....	40.00	40.00	312,403.54	844.8	2,165.26
Totals—Municipalities.....			944,302.03	2,259.8	5,791.96
Totals—Companies.....			136,709.87	358.9	919.87
Grand Totals.....			1,081,011.90	2,618.7	6,711.83

RIDEAU SYSTEM

Reserve for Contingencies Account, 31st October, 1922

Balance brought forward, 31st October, 1921.....	\$1,183.31
Added during the year ending 31st October, 1922:	
Amounts charged to Municipalities as part of the Cost of Power delivered to them.....	\$2,259.80
Provision against equipment employed in respect of contracts with Sundry Companies.....	358.90
Net profits from contracts with Sundry Power Customers.....	3,823.91
Interest at 4% per annum on monthly balances to the credit of the account.....	47.33
	6,489.94
Balance carried forward, 31st October, 1922.....	\$7,673.25

SYSTEM

under Section 23 of the Act—of Power Supplied to it by the Commission, the Amount Cost, and the Amount Remaining to be Credited to each Municipality
Cost of Power Supplied to it in the Year Ending 31st October, 1922

Share of Operating Costs and Fixed Charges				Total Cost of Power for year as provided to be paid under section 23 of Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited to each municipality upon ascertainment of the actual Cost of Power by annual adjustment
Operating Maintenance and Administrative Expenses	Interest	Renewals	Contingencies			
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
6,119.42	16,814.26	3,369.60	791.90	29,124.85	34,843.16	5,718.31
1,530.59	2,524.95	506.00	91.70	4,888.27	7,334.65	2,446.38
574.81	1,150.89	230.63	32.40	2,071.77	2,992.34	920.57
4,065.64	10,900.35	2,184.45	499.00	18,928.40	22,455.81	3,527.41
6,247.96	15,559.65	3,118.16	844.80	27,935.83	33,791.67	5,855.84
18,538.42	46,950.10	9,408.84	2,259.80	82,949.12	101,417.63	18,468.51
2,509.21	6,722.89	1,347.27	358.90	11,858.14	15,682.05	3,823.91*
21,047.63	53,672.99	10,756.11	2,618.70	94,807.26	117,099.68	.....

NOTE.—*Transferred to Credit of Contingency Reserve.

RIDEAU SYSTEM

Reserve for Renewals Account, 31st October, 1922

Total provision for Renewals to 31st October, 1921.....	\$38,472.98
Less reduction upon adjustment of Renewal Rates.....	16,242.07
	<u>\$22,230.91</u>
Deduct expenditures to 31st October, 1921.....	107.51
	<u>\$22,123.40</u>
Balance brought forward, 31st October, 1921.....	
Added during the year ending 31st October, 1922:	
Amounts charged to Municipalities as part of the Cost of Power delivered to them.....	\$9,408.84
Provision against equipment employed in respect of contracts with Sundry Companies.....	1,347.27
Interest at 4% per annum on monthly balances to the credit of the account.....	884.94
Renewals Reserve provided on second-hand equipment purchased...	12.47
	<u>11,653.52</u>
	<u>\$33,776.92</u>
Expenditures during the year ending 31st October, 1922.....	5.92
	<u>\$33,771.00</u>

RIDEAU

Statement Showing the Net Credit or Charge to Each Municipality in Respect of Power Added During the Year—also the Net Amount Credited to Each Municipality Accumulated Amount Standing as a Credit to

Municipality	Date commenced operating	Net Credit or Charge at 31st October, 1921		Amounts Credited upon adjustment of renewals reserve
		Credit	Charge	Credited
		\$ c.	\$ c.	\$ c.
Carleton Place.....	May, 1919	808.58		5,246.29
Lanark.....	Sept., 1921	65.04		19.15
Perth.....	Feb., 1919		4,088.85	4,634.29
Smiths Falls.....	Sept., 1918	2,632.06		5,709.79
Kemptville.....	Dec., 1921			
		3,505.68	4,088.85	15,609.52

THUNDER BAY

OPERATING ACCOUNT FOR YEAR

COST OF OPERATION

Cost of operating and maintaining the Generating Plant, Transmission Lines and Stations; including the proportion of administrative expenses chargeable to the operation of this System.....	\$80,973 61
Interest on Capital Investment.....	404,202.68
	\$485,176.29

NOTES—

1. Nipigon Fibre & Paper Co., Limited, charged with power held in reserve for it upon a basis of 75 per cent. of previous maximum demand: 3,067.3 horsepower at \$24.00. Amount not included in revenue of System..... \$73,615 20
2. Operating, maintenance, and administrative expenses plus interest—as above..... \$485,176.29
 Charged the City of Port Arthur with 8,908.16 horsepower at \$25.00 per horsepower..... \$222,704.15
 Actually received from the City of Port Arthur calculated on basis of 8,908.16 horsepower, at \$19.75 per horsepower plus \$517.22 per month..... 182,142.92
 Difference not covered by cash revenue..... 303,033 37
 As against which payment of interest was withheld from the Provincial Government to the extent of..... 289,132 34

SYSTEM

Supplied to it to 31st October, 1921—Payments thereon, Adjustments Made and Interest in Respect of Power Supplied in the Year Ending 31st October, 1922—and the Each Municipality at 31st October, 1922

Payments on account of such credits during the year	Interest at 4% per annum added during the year	Net amount Credited in respect of power supplied in the year ending 31st October, 1922	Accumulated amount standing as a Credit on 31st October, 1922
Charged	Credited	Credited	Credit
\$ c. 808.58 65.04 2,632.06	\$ c. 227.31 2.17 21.82 264.30	\$ c. 5,718.31 920.57 3,527.41 5,855.84 2,446.38	\$ c. 11,191.91 941.89 4,094.67 11,829.93 2,446.38
3,505.68	515.60	18,468.51	30,504.78

SYSTEM

ENDING 31st OCTOBER, 1922

REVENUE FOR PERIOD	
Charged to City of Port Arthur at rate of \$25.00 per horsepower.....	\$222,704. 15
Revenue.....	\$222,704 15
Portion of Interest deferred and collectible out of future revenue from the City of Port Arthur and other power customers on the System.....	262,472 14
	\$485,176 29

THUNDER BAY

Statement Showing the Cost of Operation, Administration and Interest and the \$25.00 per Horsepower in the year ending 31st October, 1922; also the Balance the City of Port Arthur and Other

Municipality	Rates per horsepower charged during year	Capital Cost of system as at 31st October, 1922	Average horsepower supplied in year after correction for power factor
Port Arthur.....	\$25.00	\$6,642,770.13	\$8,908.16

NOTES—

1. Nipigon Fibre & Paper Co., Limited, charged with power held in reserve for it upon a basis of 75 per cent. of previous maximum demand: 3,067.3 horsepower at \$24.00. Amount not included in revenue of System.....	\$73,615 20
2. Operating, maintenance, and administrative expenses plus interest, as above.....	485,176 29
Charged the City of Port Arthur with 8,908.16 horsepower at \$25.00 per horsepower.....	\$222,704 15
Actually received from the City of Port Arthur, calculated on basis of 8,908.16 horsepower, at \$19.75 per horsepower plus \$517.22 per month	182,142.92
Difference not covered by cash revenue.....	\$303,033 37
As against which payment of interest was withheld from the Provincial Government to the extent of	289,132 34

THUNDER BAY SYSTEM

Reserve for Renewals Account, 31st October, 1922

Total provision for renewal of (original) station and line to 31st October, 1921	\$41,311 97
Deduct—	
Expenditures to 31st October, 1921.....	9.75
Balance brought forward, 31st October, 1921.....	\$41,302.22
Added during the year 1922—	
Interest at 4% per annum on the balance to the credit of the account...	1,652 09
	\$42,954.31
Deduct—	
Expenditures during the year ending 31st October, 1922.....	520.80
Total.....	\$42,433.51

NOTE: No provision for Renewals charged against operations in the year ending 31st October, 1922.

THUNDER BAY SYSTEM

Statement showing the Total Sinking Fund Payments by the City of Port Arthur to 31st October, 1920; together with Interest allowed thereon to 31st October, 1922

Municipality	Sinking fund paid		Interest at 4% per annum allowed thereon to 31st October, 1922	Total sinking fund payment and accumulated interest to 31st October, 1922
	Period covered	Amount		
Port Arthur.....	10 years ending 31st October, 1920	\$17,437.40	\$4,678.05	\$22,115.45

SYSTEM

Amount charged the City of Port Arthur for Power Delivered at the Interim Rate of of the Year's Interest remaining to be collected out of Future Revenues from Power Customers of the System.

Operating, maintenance and administrative expenses	Amount charged to City of Port Arthur	Excess of revenue over operating, maintenance and administrative expenses	Interest	Balance of interest deferred and collectible out of future revenue
\$80,973.61	\$222,704.15	\$141,730.54	\$404,202.68	\$262,472.14

THUNDER BAY SYSTEM

Reserve for Contingencies Account, 31st October, 1922

Balance brought forward, 31st October, 1921.....	\$4,424.66
Interest at 4% per annum on the balance to the credit of the account.....	176.99
Total.....	\$4,601.65

THUNDER BAY SYSTEM

Statement showing Amount of Interest Deferred and Collectible out of Future Revenue from the City of Port Arthur and Other Power Customers on the System as at 31st October, 1922

Amount deferred as per operating statement for the year ending 31st October, 1921	Additional interest for the year ending 31st October, 1921, being the difference between current rates paid by the Province and the rate of 5 per cent previously charged	Amount deferred as per operating statement for the year ending 31st October, 1922	Total interest deferred as at 31st October, 1922
\$18,708.83	\$37,139.68	\$262,472.14	\$318,320.65

CENTRAL ONTARIO AND TRENT SYSTEM AND NIPISSING SYSTEM

The following balance sheet and operating account relates to the systems known as "Central Ontario and Trent" and "Nipissing" which together serve electrical energy to fifty-five municipalities and companies. The Central Ontario and Trent system extends from the municipality of Whitby on the west to and including the city of Kingston on the east and as far north as Lindsay. The Nipissing system supplies the town of North Bay and vicinity. These systems were purchased by the provincial Government, as at the 1st of March, 1916, from the Electric Power Company, Limited, which owned or controlled the capital stock of twenty-two subsidiary companies, the purchase price being the sum of \$8,350,000, payable in ten years, secured by a government bond issue bearing interest at four per cent per annum.

Since the acquisition of these properties, and their transfer to the Commission to operate in trust for the Government, it has been found necessary to enlarge, extend and improve the systems to meet the increasing demands for electric service.

The Central Ontario system and the Trent system both receive their electrical energy from the same sources of power supply through the same main transmission network and from the standpoint of power development and electrical operation are regarded as a unit and now known as the Central Ontario and Trent system. It may be explained that after the Central Ontario system was purchased by the Provincial Government, a number of municipalities in central Ontario, from time to time, applied to the Hydro-Electric Power Commission for power to be supplied under the provisions of the Power Commission Act. The municipalities in central Ontario which thus enter into direct relationship with the Hydro-Electric Power Commission are for purposes of financial administration grouped in what is termed the "Trent" system.

The operation of these two systems—the "Central Ontario and Trent" and the "Nipissing"—entails the generation, transformation and transmission of electrical energy to thirty-five municipalities and twenty companies, and in addition thereto the operation of three gas plants—at Peterborough, Oshawa and Cobourg—the Cobourg Waterworks, the Peterborough street railway, the Campbellford pulp mill and certain pulpwood limits connected therewith.

With the exception of fourteen municipalities, namely, Bloomfield, Havelock, Kingston, Lakefield, Madoc, Marmora, Norwood, Omemee, Oshawa Rural District, Peterborough, Picton, Stirling, Wellington and Whitby, twelve of which were connected to the system subsequent to the date of purchase, and constitute the Trent system, the whole property, local and otherwise, is operated and maintained by the Commission. Although the ownership of the whole plant is vested in the province (except the fourteen local systems of the municipalities mentioned) precisely the same methods, with respect to the control of rates, operation, maintenance, and provision for renewal of plant and equipment, are applied, as appertain to other systems controlled and operated by the Commission.

An annual adjustment of the system's capital cost and expenses is made and those municipalities operating their own utilities and which have contracts for power to be supplied at cost, receive an additional charge or credit—as the case may be—on account of power cost as ascertained by this adjustment, just as is done in the case of the municipalities comprising the Niagara system and other systems.

CENTRAL ONTARIO AND TRENT SYSTEM AND NIPISSING SYSTEM

FINANCIAL STATEMENTS

Statement of Assets and Liabilities, 31st October, 1922

Operating Account for Year Ended 31st October, 1922

Surplus Account

Statement Showing Amount to be Paid by Certain
Municipalities as the Cost of Power

Reserve for Contingencies Account, 31st October, 1922

Reserve for Renewals Account, 31st October, 1922

Statement Showing Net Credit or Charge to Each
Municipality in Respect of Power Supplied

Statement Respecting Rural Lines

CENTRAL ONTARIO
(ALSO NIPISSING)
Operated
Hydro-Electric Power
STATEMENTS OF ASSETS AND

ASSETS

Central Ontario:		
Power Developments and Hydraulic Rights.....	\$6,155,445.01	
Transformer Stations.....	725,237.53	
Transmission Lines.....	1,570,974.29	
		\$8,451,656.83
Service Buildings.....		17,477.57
Local Utilities—Electric, Gas, Water and Street Railway...		2,534,518.81
Nipissing:		
Power Development and Steam Plant.....	\$425,406.89	
Transformer Stations.....	36,177.40	
Transmission Lines.....	43,322.00	
		504,906.29
Local Utilities—Electric.....		199,842.68
Rural Lines.....		34,328.16
Pulpmill and Pulpwood Areas.....		506,182.96
		\$12,248,913.30
Investments:		
Debentures of the Town of Trenton, re sale of Waterworks.	\$19,637.66	
Debentures of the Town of Napanee re sale of Property and Water Privileges.....	12,499.15	
Interest accrued on same.....	1,240.88	
		33,377.69
Cash in Bank, and on deposit with the Commission		365,686.34
Inventories:		
Tools and Equipment.....	\$56,775.86	
Material and Supplies.....	359,629.01	
		416,404.87
Accounts Receivable		
Power and Pulp Mill Accounts.....	\$125,930.63	
Consumers' Supply—Sales Accounts.....	21,519.05	
Consumers' Light and Power Accounts.....	37,094.81	
	\$184,544.49	
Less: Reserve for Doubtful Accounts.....	9,999.06	
		174,545.43
Balances due by certain Municipalities in respect of the costs of power supplied to them as provided to be paid under their contracts with the Commission.....	\$36,996.97	
Due by Municipalities in respect of the operation of Rural Lines.....	8,925.23	
		45,922.20
Expenses Prepaid.....		26,044.94
Deferred Maintenance; re-insulation of Transmission Lines, chargeable to future operations.....		28,438.87
Operating Deficit.....		155,119.54
		\$13,494,453.18

AND TRENT SYSTEM

SYSTEM)

by the

Commission of Ontario

LIABILITIES, 31st OCTOBER, 1922

LIABILITIES			
Provincial Treasurer:			
Purchase Price of System.....	\$8,350,000.00		
Debentures issued in connection with purchase of Bruton Township Pulpwood Area.....	225,000.00		
Cash Advances.....	3,532,858.78		
			\$12,107,858.78
Accounts payable and accrued charges.....	\$111,317.11		
Consumers' Deposits.....	13,276.37		
Unearned Water Rates.....	2,400.00		
			126,993.48
Balances due to certain Municipalities in respect of accounts paid by them in excess of the cost of power supplied to them as provided to be paid under their contracts with the Commission.....			4,278.65
Reserve for Renewals.....			1,179,922.25
Reserve for Contingencies.....			38,058.00
Reserve for Sinking Fund:			
For retirement of Bonds issued in purchase of Bruton Township Pulpwood Areas.....	\$31,353.89		
For repayment of cost of Mill at Bancroft.....	3,497.88		
In respect of Rural Lines.....	2,940.25		
			37,342.02

\$13,494,453.18

CENTRAL ONTARIO
(ALSO NIPISSING
OPERATING ACCOUNT FOR

COST OF OPERATIONS

Power Department:	
Power Purchased.....	\$12,076.95
Cost of Operating and Maintaining Generating Plants, Transmission Lines, Stations, etc., including rentals of Water Powers, and the proportion of administrative expenses chargeable to the operation of the Power Department.....	366,553.52
Interest on Capital Investment.....	341,225.01
Provision for Renewal of Generating Plants, Lines, Stations, etc....	66,795.94
Provision for Contingencies.....	33,763.10
	\$820,414.52

Utilities:

Cost of Operating and Maintaining Electric Light Distribution Systems, Gas Systems, Water System and the Peterboro Street Railway, including all materials and supplies purchased and the proportion of administrative expenses chargeable to the operation of these utilities.....	\$439,776.51
Interest on Capital Investment.....	122,300.72
Provision for Renewal of Plants and Equipment.....	44,399.81
	606,477.04
Total Cost of Operation of Power Department and Utilities.....	1,426,891.56
Cost of operating the "Oshawa" Rural Lines, including power supplied, operating expenses, interest, renewals and sinking fund.....	8,297.19
Net loss for year on operation of Pulp Mill and Bruton Township Pulpwood Areas.....	91,462.54
	1,526,651.29
Net Operating Surplus for year.....	10,815.81
	\$1,537,467.10

SURPLUS

Debit Balance brought forward, 31st October, 1921.....	\$168,930.15
	\$168,930.15

AND TRENT SYSTEM

SYSTEM)

YEAR ENDING 31st OCTOBER, 1922

REVENUE

Power sold to Private Companies and certain Municipalities.....	\$261,389.73	
Power supplied to certain other Municipalities at cost in accordance with their contracts with the Commission.....	132,060.70	
Power supplied at cost to the Peterboro Street Railway and the Campbellford Pulp Mill.....	31,184.27	
		\$424,634.70
Light and Power sold to Consumers on the twenty Electric Light Distribution Systems.....	757,742.79	
Gas sold to Consumers on four Gas Systems and sales of by-products..	192,109.46	
Water sold to Consumers on one Water System.....	38,336.11	
Revenue from Peterboro Street Railway.....	90,801.70	
Total Revenue from Power Department and Utilities.....		\$1,503,624.76
Revenue from the operation of the "Oshawa" Rural Lines, less the balances credited to the Municipalities under their contracts with the Commission.....	8,297.19	
Net profit on sales of equipment and supplies.....	25,545.15	

\$1,537,467.10

ACCOUNT

Balances chargeable to Capital Construction in respect of the cost of power supplied in the three years ending 31st October, 1921.....	\$1,809.92
Additional charges against certain Municipalities, in respect of cost of power supplied in the year ending 31st October, 1921.	1,184.88
Net Operating Surplus for the year ending 31st October, 1922.....	10,815.81
Balance, as shown on statement of Assets and Liabilities.....	155,119.54
	<hr/> \$168,930.15 <hr/>

CENTRAL ONTARIO

Statement Showing the Amount to be Paid by Each of the Following Municipalities
Amount Received by the Commission from Each Municipality on Account
upon Ascertaining, by Annual Adjustment, the Actual Cost of

Municipality	Interim Rates per Horsepower collected by Commission dur- ing Year		Share of Capital Cost of system on which interest and fixed charges are payable	Average Horsepower supplied in year after correction for power factor	Share of Operating Mainten- ance and Adminis- trative Expenses
	To Dec. 31, 1921	To Oct. 31, 1922			
	\$ c.	\$ c.	\$ c.		\$ c.
Bloomfield.....	66.16	72.50	24,870.49	32.3	682.93
Havelock.....	68.00	65.00	32,175.42	57.2	1,199.59
Lakefield.....	36.36	45.00	45,399.64	97.0	1,238.50
Marmora.....	53.70	35.00	16,350.39	43.2	696.86
Norwood.....	42.00	38.00	19,326.84	58.0	872.55
Peterboro.....	.....	22.50	1,024,883.45	4,471.4	42,107.15
Picton.....	64.14	52.00	164,070.86	295.6	4,194.17
Wellington.....	52.76	50.00	36,805.90	70.9	1,034.45
Whitby.....	.....	29.00	126,699.37	494.5	5,634.59
	.....	.....	1,490,582.36	5,620.1	57,660.79

CENTRAL ONTARIO AND TRENT SYSTEM

RESERVE FOR CONTINGENCIES ACCOUNT 31st OCTOBER, 1922

Balance brought forward 31st October, 1921.....	\$7,952.61
Added during the year ending 31st October, 1922—	
By charges against Operations.....	\$33,763.10
Interest at 4% per annum on the monthly balances to the credit of the account.....	306.03
	<u>34,069.13</u>
	\$42,021.74
DEDUCT:	
Expenditures to cover contingencies met with during the year ending 31st October, 1922.....	3,963.74

Balance carried forward 31st October, 1922..... \$38,058.00

AND TRENT SYSTEM

as the Cost of Power Supplied to It under Its Contract with the Commission, the of Such Cost, and the Amount Credited or Charged to Each Municipality Power Supplied to It in the Year Ending 31st October, 1922

Operating Costs and Fixed Charges			Total Cost of Power for year as provided to be paid under contracts	Amounts paid to the Commission by each municipality or customer	Amount credited to each municipality upon ascertaining the Cost of Power by annual adjustment
Interest	Renewals	Contingencies			
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,016.88	267.67	32.30	1,999.78	2,316.58	316.80
1,307.60	328.97	57.20	2,893.36	3,743.98	850.62
1,806.53	437.96	97.00	3,579.99	4,153.00	573.01
639.67	146.28	43.20	1,526.01	1,666.84	140.83
760.06	167.52	58.00	1,858.13	2,227.73	369.60
37,843.46	6,838.73	4,471.40	91,260.74	100,606.04	9,345.30
6,609.90	1,655.89	295.60	12,755.56	16,021.79	3,266.23
1,474.78	365.33	70.90	2,945.46	3,575.72	630.26
4,678.08	904.76	494.50	11,711.93	14,339.85	2,627.92
56,136.96	11,113.11	5,620.10	130,530.96	148,651.53	18,120.57

CENTRAL ONTARIO AND TRENT SYSTEM

RESERVE FOR RENEWALS ACCOUNT, 31st OCTOBER, 1922

Total provision for Renewals to 31st October, 1921.....	\$1,090,319.22
DEDUCT:	
Expenditures to 31st October, 1921.....	45,892.70
Balance brought forward 31st October, 1921.....	\$1,044,426.52
Added during the year ending 31st October, 1922—	
By charges against Operations.....	\$115,185.46
Interest at 4% per annum on the monthly balances to the credit of the account.....	41,734.96
	156,920.42
	\$1,201,346.94
DEDUCT:	
Expenditures during the year ending 31st October, 1922.....	21,424.69
Balance carried forward 31st October, 1922.....	\$1,179,922.25

CENTRAL ONTARIO

Statement Showing the Net Credit or Charge to each Municipality in Respect of thereon and Interest Added During the year, also the Net Amount Credited Year Ending 31st October, 1922, and the Accumulated Amount Standing

Municipality	Date commenced operating	Net Credit or Charge at 31st October, 1921		Adjustment of 1921 Power Cost		Cash receipts and payments on account of such Credits and Charges made during the year	
		Credit	Charge	Credit	Charge	Credited	Charged
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Bloomfield.....	Apr., 1919		1,129.29	1.46			
Havelock.....	Feb., 1921	231.32			465.20		231.32
Lakefield.....	Aug., 1920		1,100.09	4.83			
Marmora.....	Jan., 1921	843.42			580.03		843.42
Norwood.....	Feb., 1921	120.96			383.44		120.96
Peterboro.....	Mar., 1916		40,656.39	200.96			
Picton.....	Apr., 1919	5,984.37		11.74			5,984.37
Wellington.....	April, 1919		372.27	3.02		372.27	
Whitby.....	Mar., 1916		4,808.42	17.31			
		7,180.07	48,066.46	239.32	1,428.67	372.27	7,180.07
OSHAWA RURAL DISTRICT							
Whitby Twp....	April, 1918	10,899.90					
East Whitby Twp							
Pickering Twp...							

CENTRAL ONTARIO

RURAL

Municipality	Capital Cost	Cost of Power	Operating Maintenance and Administration Expenses
	\$ c.	\$ c.	\$ c.
OSHAWA RURAL DISTRICT			
East Whitby Township.....			
Whitby Township.....	49,957.96	1,529.74	1,773.16
Pickering Township.....			

AND TRENT SYSTEM

Power Supplied to it to 31st October 1921, the Cash Receipts, Payments and Adjustments or Charged to each Municipality in respect of Power supplied in the as a Credit or Charge to each Municipality at 31st October, 1922.

Interest at 4% per annum added during the year		Net amount Credited or Charged in respect of power supplied in the year ending 31st, October, 1922		Accumulated amount standing as a Credit or Charge on 31st October, 1922	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	45.11	316.80	.....	.....	856.14
.....	18.61	850.62	.....	366.81	.....
.....	43.81	573.01	.....	.....	566.06
.....	23.20	140.83	.....	.....	462.40
.....	15.34	369.60	.....	.....	29.18
.....	1,618.22	9,345.30	.....	.....	32,728.35
.47	.....	3,266.23	.....	3,278.44	.....
.12	.....	630.26	.....	633.40	.....
.....	191.65	2,627.92	.....	.....	2,354.84
.59	1,955.94	18,120.57	.....	4,278.65	36,996.97
	435.96	2,409.82			8,925.23

AND TRENT SYSTEM
LINES

Fixed Charges			Instalments paid on bonds issued by townships	Total Cost of Power Operating Expenses and Fixed Charges	Revenue from consumers	Amount remaining to be credited to the mun- icipalities
Interest	Renewals	Sinking Fund				
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
2,869.58	995.48	568.70	560.53	8,297.19	10,707.01	2,409.82

THOROLD
Statement of Assets and

ASSETS	
Transmission and Distribution System, Contracts, Franchises and Goodwill.	\$102,076.98
Due by Consumers in respect of power accounts.	8,661.12
Hydro-Electric Power Commission of Ontario— Cash in the hands of the Commission belonging to this System.	81,429.53
	\$192,167.63

THOROLD
Operating Account for Year

COST OF OPERATION	
Power purchased.	\$23,291.15
Cost of operating and maintaining Transmission Lines and Stations, including the proportion of Administrative Expenses chargeable to this System.	1,463.73
Interest.	4,110.08
Provision for Renewal of Lines and Stations.	978.22
Provisions for Sinking Fund— For repayment of the purchase price of the System.	\$1,940.06
Collected from the Municipality of Thorold as part of the cost of power delivered to it.	290.12
	2,230.18
	\$32,073.36
Operating profit for year.	20,790.14
	\$52,863.50

Surplus	
Appropriated for the purpose of providing additional Sinking Fund for repay- ment of the purchase price of the System.	\$20,790.14
	\$20,790.14

SYSTEM

Liabilities, 31st October, 1922

LIABILITIES	
Hydro-Electric Power Commission of Ontario—	
Bonds issued to cover purchase price.....	\$100,000.00
Balance due to the Municipality of Thorold in respect of amount paid by it to 31st October, 1922, in excess of the cost of power supplied to it as provided to be paid under its contract with the Commission.....	1,318.76
Sinking Fund Reserves—	
For repayment of the purchase price of the System.....	86,621.29
Collected from the Municipality of Thorold.....	290.12
Reserve for renewals.....	3,937.46
	<u>\$192,167.63</u>

SYSTEM

Ending 31st October, 1922

REVENUE FOR PERIOD	
Power supplied to Municipality of Thorold at the interim rate of \$22.25 per horsepower.....	\$8,636.04
Less: Rebate covering the 22 months ending 31st October, 1922, upon ascertainment of the actual cost of delivering power.....	1,318.76
	<u>\$ 7,317.28</u>
Power sold to private companies.....	41,814.97
Commissions (or royalties) received from the Ontario Power Company of Niagara Falls on power sold by it to power customers in Thorold District.....	3,731.25
	<u>\$52,863.50</u>

Account

Operating profit for year.....	\$20,790.14
	<u>\$20,790.14</u>

ESSEX COUNTY
STATEMENT OF ASSETS AND

ASSETS

Transmission Lines, Transformer Stations and Local Distribution Systems.....		\$387,441.28	
Furniture and Equipment:			
Office Furniture.....	\$1,136.78		
Motor Trucks.....	680.00		
Tools.....	552.09		
			2,368.87
Materials and Supplies.....			13,846.74
Accounts Receivable:			
Consumers Accounts—Power and Light.....	\$2,218.15		
Consumers Accounts—Sundry Supplies.....	1,014.15		
Land Sold—Secured by Mortgage.....	1,011.66		
		\$4,243.96	
Less reserve for doubtful accounts.....	250.00		
			3,993.96
Operating Deficit:			
Balance forward 31st, October, 1921.....	\$32,766.32		
Net profit for year ending 31st October, 1922.....	29,188.00		
Net Deficit.....			3,578.32
			\$411,229.17

ESSEX COUNTY
OPERATING ACCOUNT FOR

COST OF OPERATION

Power Purchased.....	\$39,240.27
Cost of Operating and Maintaining Transmission Lines, Stations and Distribution Systems, including the proportion of Administrative Expenses chargeable to the operation of this System.....	28,924.11
Interest on Capital Investment.....	19,058.72
Provision for renewal of Lines, Stations and Distribution Systems.....	7,380.96
Provision for Sinking Fund.....	4,269.54
Total Cost of Operation.....	\$98,873.60
Operating Profit for the year.....	29,188.00
	\$128,061.60

SYSTEM

LIABILITIES, 31st OCTOBER, 1922

LIABILITIES

Hydro-Electric Power Commission of Ontario:	
Bonds issued to cover purchase price.....	\$226,000.00
Cash Advances from the Province of Ontario.....	22,000.00
Cash Advances from the General Funds of the Commission.....	93,960.09
	<hr/>
	\$341,960.09
Consumers Deposits.....	1,103.50
Reserve for Sinking Fund.....	20,211.54
Reserve for Renewals.....	47,954.04
	<hr/>
	\$411,229.17

SYSTEM

YEAR ENDING 31st OCTOBER, 1922

REVENUE FOR PERIOD

Sales of Power and Light.....	\$125,577.18
Profit on Sales of Supplies.....	2,484.42
	<hr/>
	\$128,061.60

ONTARIO POWER COMPANY

The Ontario Power Company of Niagara Falls, including the Ontario Transmission Company, Limited, were purchased by the Commission under the authority of the Legislature (7 Geo. V., cap. 20), and with the express approval of the Hydro-Electric municipalities of the Niagara zone. The plant has been operated by the Commission since August 1st, 1917. The statements submitted herewith show the Balance Sheet as of October 31st, 1922, the Operating Report for the year ending on that date, and a digest of the Appropriation Account showing the distribution of the surplus earnings, and the net surplus transferred to the Balance Sheet.

The Operating Statement for the year ending October 31, 1922, shows a surplus of \$549,892.27, after providing for all costs of operation, exchange, discount on bonds, bond and other interest charges, and an adequate yearly provision for renewal of the plant. This sum is augmented by the credit balance brought forward from 1921, the surplus arising from bond redemption during the year amounting to \$4,044.41. Thus there is a surplus balance of \$613,133.71, which has been appropriated to meet bond interest, exchange and the sinking fund requirements in respect to the Bonds issued by the Commission, leaving a net surplus of \$89,792.93.

The first contract for energy, signed by the Hydro-Electric Power Commission of Ontario, was made in 1908 with the Ontario Power Company, then a private corporation operating under a Federal charter. The agreement was for the purchase of an ultimate maximum of 100,000 horsepower, at a rate ranging from \$9.40 to \$9.00 per horsepower per annum.

Within five years the full amount of energy contracted for was being taken, and more was urgently required to serve the needs of the associated municipalities of the Niagara System.

The Ontario Power Company was the only one of the three generating corporations which was not using its full allotment of water. There was talk of expropriating one of the plants as a war measure, but while that proposal was still being discussed, the Hydro-Electric Power Commission obtained by negotiation an option on the Ontario Power Company's property as a going concern. Authority to acquire the shares of a private electrical corporation was granted to the Commission by the Legislature, and the municipalities of the Niagara System gave their approval to the proposed purchase.

The agreement provided for the purchase by the Hydro-Electric Power Commission of the stock of the Ontario Power Company and its auxiliary, the Ontario Transmission Company, Limited, for the sum of \$8,000,000 in forty-year, four per cent. Bonds of the Commission, guaranteed by the Province, and the assumption of the bonded indebtedness of the Corporation.

The purchase was made on August 1st, 1917. As soon as the property came into the hands of the Commission plans were made to increase its normal generating capacity by putting in a new conduit, and adding two generating units. The cost of this conduit, a wood-stave pipe line, and of the equipment which it was designed to serve, was \$3,514,676.62.

The Operating Report shows a revenue for the year of \$3,119,478.01, a little more than one-half of which was collected from the municipalities of the Niagara System for power supplied to them; that is to say, the private contracts of the plant provide a sufficient income to meet about 44 per cent. of the carrying charges—if the prices for power sold were equalized to municipal and private customers.

After providing for interest charges of \$1,050,083.30, operating expenses of \$194,856.24, taxes, water rentals and other items of current outlay, the revenue permitted the setting aside of \$116,491.96 for the renewal of the plant, the provision of \$191,239.20 for maintenance charges and of \$682,928.97 for the purchase of additional power required. There was a surplus balance of \$549,892.27 carried into Appropriation Account, as the statement shows.

THE ONTARIO POWER COMPANY OF NIAGARA FALLS AND
Balance Sheet

ASSETS

Plant, Real Estate, Transmission Lines, Distributing Stations and Rights, Franchises and Goodwill.....	\$25,132,427.40	
Third Pipe Line to Power Plant, including additional Generating Equipment.....	3,514,676.62	\$28,647,104.02
Discount on Bonds capitalized, less amounts written off, \$757,689.95.....	933,695.96	
American Exchange on remittances to retire 1921 Bonds, less amounts written off, \$24,236.93.....	333,920.77	1,267,616.73
Construction Equipment.....	6,389.36	
Maintenance Tools and Equipment.....	25,944.81	
Furniture and Fixtures.....	8,533.19	
Instruments.....	452.96	
Horses, Wagons and Sundry Equipment.....	1,198.54	
Materials.....	40,926.74	83,445.60
Accounts Receivable.....	333,110.42	
Cash in Bank—Current Account.....	198,973.16	
For payment of Outstanding Interest Coupons..	51,295.00	
Sinking Fund on Deposit with Trustees.....	1,137.24	
Deposit with Supreme Court of Canada—since returned.....	169,425.24	753,941.06
J. J. Albright—Claims against.....		295,633.20
Insurance and Taxes prepaid.....		18,648.70
		\$31,066,389.31

THE ONTARIO TRANSMISSION COMPANY, LIMITED

31st October, 1922

LIABILITIES

Capital Stock:

Ontario Power Company of Niagara Falls, 100,000 shares of par value of \$100 each.....	\$10,000,000.00	
Ontario Transmission Company, Limited, 10,000 shares of par value of \$100 each.....	1,000,000.00	
		\$11,000,000.00

Bonds and Debentures:

Ontario Power Company of Niagara Falls, First Mortgage 5% Gold Bonds, due 1st February, 1943, issued and outstanding.....	9,092,000.00	
(Pledged to the Bank of Montreal to secure advances to the Hydro-Electric Power Commission of Ontario, \$1,400,000.)		
Ontario Transmission Company, Limited, First Mortgage 5% Gold Bonds, due 1st May, 1945.....	1,599,000.00	
Interest accrued to 31st October, 1922.....	153,625.00	
Interest Coupons due, not yet presented for payment....	11,320.00	
		10,855,945.00

Hydro-Electric Power Commission of Ontario:

Re Construction of Third Pipe Line.....	3,514,676.62	
Re 6% 1941 Bonds issued by the Commission for the purpose of retiring the 1921 issue of the Power Company.....	\$3,200,000.00	
Accrued Interest thereon.....	67,856.16	
	3,267,856.16	
Accrued Interest on \$8,000,000 Bonds issued by the Commission to cover the purchase price of the capital stock of the Power Company.....	80,000.00	
Current Account.....	297,912.15	
		7,160,444.93

Accounts Payable and Accrued Charges.....		23,227.60
Reserve set aside to cover claims made by the Queen Victoria Niagara Falls Park Commission for contingencies.....		527,684.30
Provision to cover accrued portion of Sinking Funds to 31st October, 1922, on:		
(a) Ontario Transmission Company 5% Bonds.....	10,248.11	
(b) 6% 1941 bonds issued by the Commission for the purpose of retiring the 1921 issue of the Power Company.....	11,309.59	
		21,557.70

Reserve for Renewal of Plant, Equipment and Transmission Lines.....		1,387,736.85
Surplus.....		89,792.93
		\$31,066,389.31

**THE ONTARIO POWER COMPANY OF NIAGARA FALLS AND
Combined Revenue and Expenditure Account**

EXPENDITURE

Power Purchased.....	\$682,928.97	
Water Power Rentals.....	122,505.54	
Taxes.....	95,109.56	
Maintenance Costs.....	191,239.20	
Operating Expenses.....	194,856.24	
Insurance Premiums.....	9,279.54	
Administration and Legal Expenses.....	60,750.46	
Depreciation on Furniture, Instruments, Construction Plant and Tools.....	46,340.97	1,403,010.48
Provision for Renewal of Plant and Equipment.....		116,491.96
Bond Interest:—		
On issues of the Companies.....	\$539,794.45	
Exchange thereon.....	15,113.21	
On 6% 1941 issue of the Commission.....	192,000.00	
		746,907.66
Proportion of Discount on Bonds:—		
On issues of the Companies.....	\$38,420.04	
On 6% 1941 issue of the Commission.....	7,824.00	
		46,244.04
Proportion of American Exchange on remittance to retire 1921 bonds.....	17,907.84	
Interest on Cash Advances re Third Pipe Line.....	196,743.86	
Other Interest.....	42,279.90	
		1,050,083.30
		\$2,569,585.74
Operating Surplus carried to Appropriation Account.....		549,892.27
		\$3,119,478.01

**THE ONTARIO POWER COMPANY OF NIAGARA FALLS AND
Appropriation**

Provision for Sinking Funds:		
On \$8,000,000 bonds issued by the Commission to cover the purchase price of the capital stock of the Power Company.....	\$100,000.00	
On 6% 1941 bonds to the amount of \$3,200,000 issued by the Commission for the purpose of retiring the 1921 bonds of the Power Company.....	32,000.00	
On Cash Advances re construction of Third Pipe Line....	63,264.36	
		195,264.36
Provision for Interest on \$8,000,000 Bond issue of the Com- mission.....	\$320,000.00	
American Exchange thereon.....	8,076.42	
		328,076.42
Surplus carried forward to Balance Sheet.....		89,792.93
		\$613,133.71

THE ONTARIO TRANSMISSION COMPANY, LIMITED

For Year Ended 31st October, 1922

REVENUE

Power Sales—		
To Sundry Customers.....	\$1,357,119.80	
To Hydro-Electric Power Commission of Ontario for the purpose of—		
(a) The Niagara System.....	\$1,619,811.49	
(b) St. Catharines and other Municipalities in that district.....	111,792.11	
(c) The Thorold System.....	20,905.67	
		1,752,509.27
Miscellaneous Revenue.....	\$3,109,629.07	9,848.94
		<u>\$3,119,478.01</u>

THE ONTARIO TRANSMISSION COMPANY, LIMITED

Account

Surplus brought forward, 31st October, 1921.....	\$ 59,197.03	
Operating Surplus for year brought down.....	549,892.27	
Profit on Bonds redeemed in the year:		
First Mortgage Bonds of the Power Company (\$126,000.00)	\$3,044.41	
First Mortgage Bonds of the Transmission Company (\$31,000.00).....	1,000.00	
		4,044.41
		<u>\$613,133.71</u>

HYDRO-ELECTRIC POWER

Account with the Provincial Treasurer

OCTOBER 31ST, 1922:		
Cheque to cover interest for year ending October 31st, 1922.....	\$5,863,233.86	-
NOVEMBER 1ST, 1921, TO OCTOBER 31ST, 1922:		
Provincial Expenditures.....	171,769.89	
Balance brought forward from October 31st, 1921:		
Being balance of amount expended in connection with Radial Railway Surveys and Investigations in year ending October 31st, 1921, and carried by Commission pending advances from the Province out of appropriations as authorized by orders-in- council dated October 28th, 1921.....	\$336,995.70	
Interest at 6.5 per cent on above for one year to October 31st, 1922.....	21,904.72	
		358,900.42
Balance carried down.....	118,024,532.23	
		<u>\$124,418,436.40</u>

COMMISSION OF ONTARIO

for the Year Ending 31st October, 1922

NOVEMBER 1ST, 1921:

Balance brought down—

General Account..... \$39,515,930.33

Chippawa Development Account..... 53,040,674.52

Central Ontario System Account..... 11,273,712.78

\$103,830,317.63

NOVEMBER 1ST, 1921, TO OCTOBER 31ST, 1922:

Sundry Cash Advances—

General Account..... \$5,062,600.00

Chippawa Development Account..... 8,237,871.00

Central Ontario System Account..... 834,146.00

Provincial Expense Account..... 230,000.00

14,364,617.00

OCTOBER 31ST, 1922:

Interest on Balances from November 1st, 1921, to October

31st, 1922..... 6,151,716.36

Deferred Interest in respect to Nipigon System for year

ending October 31st, 1921..... 71,785.41

\$124,418,436.40

NOVEMBER 1ST, 1922:

Balance..... \$118,024,532.23

SECTION X

MUNICIPAL ACCOUNTS

The Municipal Accounts section of this report presents the results of the operation of the various Hydro systems from a municipal standpoint collectively and individually. Statements prepared from figures extracted from the books of all Hydro municipalities are submitted herein to show how each has operated during the past two years; also the financial status at the present time; as well as much useful statistical information, all so arranged as to permit of comparisons being made between various systems and between different municipalities in each system.

The books of account in all municipalities which have contracted with the Hydro-Electric Power Commission of Ontario for a supply of power are kept in accordance with the provisions set forth in the publication "Uniform Accounting for Municipal Electric Utilities," issued by the Commission. The Commission, by a system of periodical inspections and reports, keeps in close touch with the operating conditions of each local system.

During the year 1922, the Uniform Accounting system was installed in the following municipalities as each became ready for the service: Alvinston, Ford City, Port Perry, Riverside, St. Clair Beach, Tecumseh, Thedford and Uxbridge.

Periodical inspections were made of the books of all Hydro municipalities, and local officials have been assisted in the improvement of their office routine with a view to standardizing, as far as possible, the methods employed. In the majority of the smaller municipalities, much of the bookkeeping is performed by representatives of the Municipal Audit department, in order to insure the employment of proper classifications of revenue and expenditures, to save time in preparation of reports, to insure compliance with all the requirements of the Standard Accounting system, and to make certain that the accounts represent as truly as possible the actual operating results for the year.

The first financial statement in this preface presents consolidated operating reports for each year since Hydro was inaugurated and combines the results of all the systems. Study of this report will show that the revenue has been increasing to a most satisfactory degree. The annual surpluses, after providing all possible cost of operation, including an adequate depreciation charge, have increased until, in 1922, the combined annual surpluses amounted to \$696,524.19.

The second statement presents consolidated balance-sheets for each year since 1912, and also shows clearly the march of progress. It is worth noting that the total plant value has increased from \$10,081,469.16 in 1913 to \$42,706,840.87 in 1922; and the total assets from \$11,907,826.86 to \$55,126,834.09. The liabilities have not increased in the same proportion as the assets, rising from \$10,468,351.79 to \$35,196,388.35. The reason for this is that much of the cost of the increasing plant value has been financed out of Surplus and Reserve accounts without increasing the liabilities of the various systems. By this procedure the funds of the systems are used to best advantage. Examination of the results will also show that there is a steady decline in the percentage of net debt to total assets; being from 88.0 per cent in 1913 to 65.6 per cent in 1922. The equity in the Hydro-Electric Power Commission System auto-

matically acquired through the inclusion of sinking fund as part of the cost of power is not taken into account in arriving at these percentages.

Combined Balance Sheets: Following "Statement A" are presented balance-sheets combining the financial results of the two distinct divisions into which, so far as finances are concerned, the whole Hydro-Electric undertakings of the municipalities is divided. This matter is referred to at greater length on page 190 in the Introduction to Section IX, and information respecting the several columns of figures is given in statements immediately preceding these balance-sheets.

The seven statements, "A" to "G," following these two consolidated reports, show the results of operations and the financial status of each municipal system, and also give information respecting revenue, number of consumers and consumption; cost of power to municipalities; power and lighting rates charged to consumers, etc. Some of the figures are comparative for the past two years and others for all the years of operation. In the statements "A," "B," and "C," the figures are arranged in groups under each system and alphabetically for the municipalities in each system; in the statements, "D" to "G," all "Hydro" municipalities are arranged alphabetically.

"Statement A" shows comparative balance-sheets for each municipality for the past two years, with the plant value sub-divided into the general natural sub-divisions specified in the standard accounting system, and there are also shown the other items which make up the total assets. It is to be noted that among the assets there are items entitled "Equity in Hydro System." These items represent the amount of accumulated Sinking Fund paid by the various municipalities through the medium of "Power Cost" toward the ultimate retirement of the Hydro-Electric Power Commission's construction debt. The total accumulation to the end of 1922 is shown on the Consolidated Balance-sheet to be \$1,543,434.12.

In each case the balance-sheet is complete and final, including either in "Accounts receivable" or "Accounts payable" the adjustments with this Commission of the differences between the estimated and the actual costs of power.

The actual liabilities of each local system are set out under their general sub-divisions,—debenture balance, accounts payable, bank overdraft, and other liabilities, this last account including local debentures issued by municipalities to finance ornamental street light systems as local improvements.

The reserves for depreciation, and the acquired equity in the Hydro-Electric Power Commission system, are also listed separately and totalled; and under the heading "Surplus" is included not only the free operating profit but the accumulation of sinking fund applicable to debenture debt and also the amount of debentures already retired out of revenue which properly belong under this heading.

The Depreciation Reserve now amounts to 23.6 per cent of the total depreciable plant, while the Depreciation Reserve and Surplus combined have already reached a sum approximating 43.6 per cent of the total plant cost.

"Statement B" is a consolidated condensed operating report, showing the essential figures of each municipal system's operation in such a manner as to facilitate a ready comparison of the various results. The population served by each system, as well as the number of customers and the load taken in December, 1922, are also shown in order to give an idea of the relative sizes of the respective utilities.

Of the 214 municipalities included in this report, a total of 24 failed to meet their actual cost of operation without regard to depreciation. A total of 42, including the above, failed to provide full theoretical depreciation in addition to all operating and maintenance expenses, but their relative unimportance is clearly disclosed by an examination of the reports. These 42 municipalities indicate a total theoretical loss of \$135,004.40, while the remaining 172 municipalities piled up a surplus of \$830,341.70, thus leaving a net surplus from all Hydro municipalities of \$695,337.30 during the year.

"Statement C" shows comparative detailed operating reports for each utility for 1921 and 1922 where the operation has been for two years and for 1922 only where the service was inaugurated during that year. The cost of power includes the adjustment made by this Commission and hence covers the actual cost and not the cost at the interim billed rates.

"Statement D," in many respects, is the most interesting report in the series. It gives more information respecting the actual results of operation from the viewpoint of the consumer than is obtainable from the published reports of any other system of electric utilities regardless of where operated or whether publicly or privately owned.

This **"Statement D"** shows the revenue, kilowatt-hour consumption, number of consumers, average monthly consumption, average monthly bill and the net average cost per kilowatt-hour both for domestic and for commercial service in each municipality since **"Hydro"** was first installed. For comparative purposes the rates in effect prior to the installation of **"Hydro"** are also indicated. The average flat-rate cost of horsepower as billed to power customers since 1917 is also shown.

In many municipalities the average monthly bill has increased during the past two years. This is due to the steady increase in the use of better lighting, and the general installation of ranges, heaters and miscellaneous appliances. It is estimated that over 26,000 electric ranges are now in use and the number is increasing at a rate of over 1,000 per month. In practically all municipalities the cost per kilowatt-hour has been steadily declining, due to the constantly increasing use of electric appliances, the adoption of a uniform follow-up rate of 2 cents for domestic and farm service throughout the province, and the consequently large number of kilowatt-hours consumed at the lower rate.

"Statement E" shows the installation of street lights in each municipality together with the rates set by this Commission, the revenue for 1922 and the cost per capita in each municipality.

"Statement F" and **"Statement G"** present the local rates in use by each utility and also those charged by the Commission on the interim power bills.

The automatic reduction in the debenture debt, due to the annual principal or sinking fund payments being provided for out of revenue, and the remarkable accumulation of assets reflect the satisfactory financial condition of the Hydro utilities generally. The following tabular statements show in condensed form the relation of assets to liabilities in fifty municipalities. In the first eighteen municipalities the quick assets such as cash, bonds, accounts receivable and inventories exceed in value the total liabilities, including the debenture balance, and they may fairly be considered as being out of debt. In the remaining thirty-two municipalities the excess of liabilities over the quick assets is relatively so small that a number of them will be transferred to the **"out-of-debt"** list when the books are closed at the end of 1923.

Municipality.	Total assets.		Total liabilities.		Total quick assets.	Net balance liabilities over quick assets.		Excess of quick assets over all liabilities.		
	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.
Acton.....	37,938	37	5,775	83	5,941	14			165	31
Baden.....	18,683	87	4,615	10	6,397	11			1,782	01
Barrie.....	212,701	82	31,418	72	70,735	65			39,316	93
Beachville.....	26,627	81	5,164	50	11,359	99			6,195	49
Bothwell.....	16,968	99	5,889	39	7,311	73			1,422	34
Collingwood.....	158,602	12	20,156	89	35,116	69			14,959	80
Creemore.....	20,813	67	4,751	20	8,529	62			3,778	42
Elmvale.....	19,067	20	5,674	78	5,817	70			142	92
Georgetown.....	71,055	61	17,092	91	22,648	35			5,555	44
New Toronto.....	104,822	26	18,300	61	20,140	97			1,840	36
Norwich.....	43,503	17	12,144	68	14,108	68			1,964	00
Ridgetown.....	53,561	15	15,073	44	20,975	90			5,902	46
Rockwood.....	11,065	01	678	83	725	13			46	30
St. George.....	14,401	64	5,245	12	7,125	17			1,880	05
Tavistock.....	27,008	36	3,385	71	11,930	96			6,545	25
Waterdown.....	24,045	58	4,573	69	6,693	80			2,120	11
Waterford.....	22,891	92	242	76	3,817	00			3,574	24
Zurich.....	12,293	04	5,233	45	5,254	58			21	13
Ailsa Craig.....	18,158	50	6,448	66	5,854	93	593	73		
Brampton.....	150,665	11	53,101	99	39,147	08	13,954	91		
Coldwater.....	18,046	32	7,448	51	5,645	56	1,802	95		
Delaware.....	6,022	10	3,682	58	2,540	00	1,142	58		
Dorchester.....	10,897	30	3,773	06	2,158	38	1,614	68		
Dresden.....	31,880	86	11,055	81	5,081	69	5,974	12		
Dutton.....	18,020	19	7,606	32	4,832	08	2,774	24		
Granton.....	7,856	12	3,721	17	2,645	54	1,075	63		
Guelph.....	487,097	31	148,929	63	103,781	64	45,047	99		
Hagersville.....	29,162	55	6,426	62	4,316	58	2,110	04		
Ingersoll.....	196,139	68	87,262	02	56,767	18	30,494	84		
Lucan.....	26,469	44	8,761	29	8,634	73	126	56		
Midland.....	217,973	44	81,253	83	42,160	39	39,093	44		
Milton.....	60,103	10	16,185	15	14,236	97	1,948	18		
Mitchell.....	63,514	01	6,928	15	6,277	83	650	32		
Mt. Brydges.....	8,828	73	3,653	53	3,197	79	455	74		
Otterville.....	10,568	81	3,523	65	3,374	53	194	12		
Palmerston.....	46,945	15	13,848	63	13,828	74	19	89		
Paris.....	148,613	63	45,371	36	24,994	40	20,376	96		
Penetang.....	104,684	92	33,644	03	23,760	96	9,883	07		
Port Credit.....	25,293	34	7,089	03	5,279	01	1,810	02		
Rodney.....	16,311	95	7,691	76	3,985	58	3,706	18		
St. Jacobs.....	11,334	24	5,173	51	4,276	56	896	95		
St. Thomas.....	433,918	37	114,578	32	72,069	29	42,509	03		
Seaforth.....	81,229	34	27,059	86	23,254	42	3,805	44		
Stayner.....	27,563	20	10,240	83	6,084	68	4,156	15		
Strathroy.....	95,293	23	34,963	01	17,979	18	16,983	83		
Victoria Harbor.....	12,592	20	4,958	96	3,592	50	1,366	46		
Wallaceburg.....	140,077	88	68,060	64	42,831	75	25,228	89		
Waubashene.....	7,293	39	2,701	36	2,303	20	398	16		
West Lorne.....	20,692	15	7,294	15	7,096	46	197	69		
Woodbridge.....	23,505	30	8,369	12	7,196	53	1,172	69		

A study of these various reports will clearly show that Hydro business in general and that of Hydro municipalities in particular are in a most satisfactory financial condition. There is no criticism of the working out of the economic policies of the Hydro-Electric Power Commission of Ontario which cannot intelligently and satisfactorily be met with direct appeal to the official figures in the balance sheets and operating reports herein presented.

CONSOLIDATED

YEAR	1912	1913	1914	1915
Number of municipalities included.....	28	45	69	99
EARNINGS	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....		572,154.38	789,130.81	944,271.08
Commercial light.....		525,438.16	673,803.92	720,209.26
Commercial power.....		905,378.17	1,214,829.31	1,501,797.78
Municipal power.....				
Street light.....		560,925.56	698,409.71	835,970.87
Rural.....				
Miscellaneous.....		53,543.24	57,482.41	68,046.29
Total Earnings.....	1,617,674.00	2,617,439.51	3,433,656.16	4,070,295.28
EXPENSES				
Power purchased.....		789,632.87	1,045,752.65	1,485,614.72
Substation operation.....		78,394.81	97,658.90	107,607.31
Substation maintenance.....		18,698.46	31,790.99	25,935.56
Distribution system operation and maintenance.....		104,114.51	130,998.65	154,409.71
Line transformer maintenance.....		8,547.61	11,764.32	11,508.92
Meter maintenance.....		5,222.19	9,536.07	12,899.14
Consumers' premises expenses.....		53,108.38	65,192.23	47,494.26
Street light operation and maintenance.....		84,903.76	113,047.80	136,983.38
Promotion of business.....		72,303.51	86,683.02	74,402.55
Billing and collecting.....		77,351.76	103,560.71	131,541.27
General office, salaries and expenses..		154,932.69	230,899.75	236,777.86
Undistributed expense.....		65,423.64	89,350.91	129,209.15
Interest.....		528,549.21	662,092.34	817,978.89
Sinking fund and principal payments on debentures.....		*	*	*
Total expenses.....	1,377,168.00	2,041,183.40	2,678,328.34	3,371,414.00
Surplus.....	240,506.00	576,256.11	755,327.82	698,881.28
Depreciation charge.....	124,992.47	262,675.24	357,883.31	414,506.99
Surplus less depreciation.....	115,513.53	313,580.87	397,444.51	284,374.29

*Debenture payments included in "Interest."

OPERATING REPORT

1916	1917	1918	1919	1920	1921	1922
128	143	166	181	186	205	214
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,172,878.96	1,417,460.31	1,632,272.12	1,991,632.31	2,546,345.30	3,149,080.03	3,786,608.23
812,130.78	899,023.72	968,399.42	1,175,143.56	1,512,854.63	1,851,501.76	2,158,306.34
1,921,152.31	2,665,280.65	3,417,248.37	3,443,107.13	3,752,188.22	3,895,437.46	4,383,912.97
930,057.48	967,495.10	902,875.55	988,900.95	532,279.09	654,531.01	973,263.38
147,381.50	120,805.39	161,243.70	228,270.65	1,005,535.11	1,060,357.77	1,160,446.81
				168,919.95	145,566.57	105,877.09
				189,778.63	225,467.70	187,689.39
4,983,601.03	6,070,065.17	7,082,039.16	7,827,054.60	9,707,900.93	10,981,942.30	12,756,104.21
1,959,446.83	2,563,880.17	2,807,769.33	3,284,490.68	4,216,667.87	4,876,650.31	6,636,853.37
153,761.08	203,091.20	238,257.34	217,638.89	285,407.35	314,838.35	315,443.70
46,131.53	42,129.04	60,805.92	81,853.63	102,050.81	104,798.01	100,763.67
154,247.17	169,326.24	223,347.81	286,310.76	344,551.57	487,918.33	519,252.16
14,528.17	25,328.95	30,488.83	42,509.12	46,323.09	65,088.46	52,932.26
24,218.48	44,461.55	63,155.56	78,726.64	123,701.18	116,722.97	107,806.88
52,602.01	61,765.14	65,149.59	84,301.24	116,283.52	134,854.92	143,388.88
145,471.50	157,857.73	196,157.18	215,963.86	236,930.79	297,481.52	297,363.86
79,324.85	73,516.37	64,962.78	77,789.22	78,294.85	101,804.46	129,932.63
154,508.58	188,083.84	208,660.76	236,504.75	295,942.88	321,685.71	338,153.50
306,709.35	349,932.05	421,680.15	452,131.22	559,695.29	656,268.11	605,852.50
97,333.97	102,938.80	117,474.07	190,690.09	256,400.33	308,874.42	385,895.03
951,781.99	1,085,180.80	1,238,425.53	1,285,571.51	1,431,807.16	998,611.47	1,074,657.44
*	*	*	*	*	532,183.96	635,469.90
4,140,065.51	5,077,491.08	5,736,334.85	6,531,481.61	8,094,056.69	9,317,781.00	11,343,765.78
843,535.52	992,574.09	1,345,704.31	1,295,572.99	1,613,844.24	1,664,161.30	1,412,338.43
486,141.80	607,296.29	718,162.30	814,219.37	902,028.75	1,044,434.85	715,814.24
357,393.72	385,367.80	627,542.01	481,353.62	711,815.49	619,726.45	696,524.19

CONSOLIDATED

YEAR	1913	1914	1915	1916
Number of municipalities included.....	45	69	99	128
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....	626,707.34	791,732.20	873,838.18	1,335,936.33
Substation equipment.....	1,090,875.69	1,476,087.84	1,582,062.56	1,934,626.12
Distribution system—overhead.....	2,690,834.74	3,422,763.93	4,234,626.05	4,832,353.27
Distribution system—underground...	644,514.24	807,153.53	928,420.77	1,095,709.62
Line transformers.....	615,546.20	787,613.52	981,754.70	1,179,132.07
Meters.....	840,606.64	1,172,475.11	1,418,165.08	1,711,299.49
Street lighting equipment—regular...	900,614.80	1,071,255.37	1,309,628.49	1,251,057.13
Street light equip.—ornamental.....	62,765.34	270,386.55	197,644.82	306,388.95
Miscellaneous constr. expenses.....	866,551.89	2,062,035.90	1,701,182.66	2,059,263.42
Steam or hydraulic plant.....	1,401,175.28	420,108.33	461,651.60	864,500.01
Old plant.....	341,277.00	619,513.12	1,184,372.86	759,748.66
Total plant.....	10,081,469.16	12,901,125.40	14,873,347.77	17,330,015.07
Bank and cash balance.....	450,887.97	422,350.12	284,653.96	1,061,029.90
Securities and investments.....				
Accounts receivable.....	344,487.95	561,873.08	602,920.69	695,152.23
Inventories.....	540,274.58	615,226.76	726,556.76	764,504.59
Sinking fund on local debentures....	431,747.27	625,217.03	868,983.78	1,166,017.73
Equity in Hydro system.....				
Other assets.....	58,959.93	123,410.97	326,801.11	342,215.87
Total assets.....	11,907,826.86	15,249,203.36	17,683,264.07	21,358,935.39
LIABILITIES				
Debenture balance.....	8,711,308.37	10,678,078.36	11,831,811.03	15,058,641.57
Accounts payable.....	1,553,711.45	1,682,150.29	2,040,038.01	969,187.75
Bank overdraft.....	160,919.16	228,622.50	292,106.44	178,413.26
Other liabilities.....	42,412.81	113,838.66	37,388.31	491,874.90
Total liabilities.....	10,468,351.79	12,702,689.81	14,201,343.79	16,698,117.48
RESERVES				
For depreciation.....	478,145.88	850,618.07	1,337,739.73	1,843,804.68
For equity in H.E.P.C. system.....				
Total reserves.....	478,145.88	850,618.07	1,337,739.73	1,843,804.68
SURPLUS				
Debentures paid.....	202,751.26	320,129.10	394,466.22	549,778.59
Local sinking fund.....	431,747.27	625,217.03	868,983.78	1,165,785.94
Additional operating surplus.....	326,830.66	750,549.35	880,730.55	1,101,448.70
Total surplus.....	961,329.19	1,695,895.48	2,144,180.55	2,817,013.23
Total liabilities, reserves and surplus.	11,907,826.86	15,249,203.36	17,683,264.07	21,358,935.39
Percentage of net debt to total assets	88	83.3	80.3	78.4

BALANCE SHEET

1917	1918	1919	1920	1921	1922
143	166	191	195	215	226
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,546,241.41	1,859,888.69	1,995,545.83	2,175,568.24	3,230,985.63	3,334,522.68
2,471,293.82	2,820,448.70	2,915,125.56	3,231,050.80	5,403,689.90	5,046,857.98
6,080,073.42	6,627,237.39	7,445,820.31	8,579,881.49	8,397,361.48	11,165,330.24
1,157,059.90	1,216,288.59	1,206,296.88	1,313,369.29	1,401,135.97	1,598,053.02
1,483,839.44	1,772,691.35	2,073,113.45	2,560,581.59	3,077,649.83	3,618,684.73
1,999,095.48	2,238,143.70	2,587,566.32	3,053,135.20	3,552,076.79	4,033,689.52
1,237,734.69	1,200,625.65	1,206,638.71	1,269,006.98	1,335,997.13	1,419,016.05
361,975.74	531,502.61	546,497.68	557,678.13	610,586.70	666,084.50
2,184,015.84	2,395,096.50	2,530,101.08	2,697,636.12	3,030,134.16	3,261,495.74
896,753.20	214,575.75	986,200.57	757,194.47	704,848.46	565,158.54
649,852.51	1,476,413.00	805,959.89	864,298.39	912,388.55	7,997,947.87
20,077,935.45	22,352,951.93	24,298,866.28	27,059,400.70	31,656,854.60	42,706,840.87
340,026.50	391,194.91	462,437.23	943,858.12	900,842.34	1,164,336.24
.....	.....	627,076.53	341,855.88	556,608.53	443,938.18
1,285,097.33	1,124,018.44	1,921,166.69	2,022,538.88	2,148,287.05	3,874,317.14
1,261,398.36	972,996.96	1,032,569.75	1,400,671.89	1,504,596.28	1,738,795.96
1,337,578.96	1,663,298.05	1,925,455.77	2,244,004.34	2,541,718.35	3,416,231.45
.....	.....	369,071.89	577,584.06	795,570.51	1,543,434.12
125,240.05	444,787.63	86,216.05	25,447.07	78,929.84	238,940.13
24,427,276.65	26,949,247.92	30,722,860.19	34,615,360.94	40,111,979.23	55,126,834.09
15,593,773.61	17,209,217.70	18,133,462.44	19,268,072.04	21,619,220.99	30,454,186.12
1,537,669.11	1,007,727.79	1,420,926.66	1,840,137.54	1,887,567.93	3,699,292.52
886,177.94	576,816.49	403,235.57	514,671.99	989,099.98	456,706.69
429,104.20	350,013.21	670,271.90	642,293.65	938,368.84	586,203.02
18,446,724.86	19,143,775.19	20,627,896.57	22,265,175.22	25,434,257.74	35,196,388.35
2,463,723.83	3,133,550.17	3,750,162.28	4,788,645.03	5,491,858.93	6,512,813.92
.....	.....	373,871.89	577,584.06	800,249.05	1,543,434.12
2,463,723.83	3,133,550.17	4,124,034.17	5,366,229.09	6,292,107.98	8,056,248.04
694,797.90	920,076.56	1,328,657.68	1,440,157.52	1,860,079.53	3,104,591.15
1,340,615.38	1,662,602.69	1,754,020.37	2,246,474.47	2,541,718.35	3,416,231.45
1,481,414.68	2,089,243.31	2,888,251.40	3,297,325.64	3,983,815.63	5,353,375.10
3,516,827.96	4,671,922.56	5,970,929.45	6,983,956.63	8,385,613.51	11,874,197.70
24,427,276.65	26,949,247.92	30,722,860.19	34,615,360.94	40,111,979.23	55,126,834.09
75.5	71.0	67.9	65.4	64.7	65.6

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA
SYSTEM

Municipality	Acton		Ailsa Craig		Alvinston
Population	1,742		547		659
	1921	1922	1921	1922	1922
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....	1,500.00	1,545.45			
Substation equipment.....	597.62	597.62			
Distribution system, overhead...	9,917.78	10,674.47	6,559.22	6,559.22	13,103.30
Distribution system, underground					
Line transformers.....	3,648.03	5,215.98	2,020.97	2,020.97	3,186.71
Meters.....	4,113.28	5,006.60	1,688.01	1,699.09	2,788.73
Street light equipment, regular...	1,041.02	1,071.18	362.97	362.97	1,052.29
Street light equip., ornamental...					
Misc. construction expense.....	1,512.29	1,360.89	492.36	492.36	890.68
Steam or hydraulic plant.....					
Old plant.....	3,481.50	3,481.50			1,185.00
Total plant.....	25,811.52	28,953.69	11,123.53	11,134.61	22,206.71
Bank and cash balance.....	1,234.84	922.18	1,326.40	3,640.85	1,878.61
Securities and investments.....	3,000.00	2,000.00	2,000.00	2,000.00	
Accounts receivable.....	1,017.85	1,281.67	622.18	214.08	
Inventories.....	955.10	1,737.29			18.83
Sinking fund on local debentures...					
Equity in Hydro systems.....	1,822.04	3,043.54	322.53	1,168.96	26.58
Other assets.....					
Total assets.....	33,841.35	37,938.37	15,394.64	18,158.50	24,130.73
Deficit.....					262.99
Total.....	33,841.35	37,938.37	15,394.64	18,158.50	24,393.72
LIABILITIES					
Debenture balance.....	6,027.21	5,646.50	6,458.14	6,302.26	1,875.57
Accounts payable.....	82.00	129.33	331.45	146.40	22,237.90
Bank overdraft.....					
Other liabilities.....					
Total liabilities.....	6,109.21	5,775.83	6,789.59	6,448.66	24,113.47
RESERVES					
For depreciation.....	5,339.84	5,892.34	2,094.00	2,314.00	
For equity in H.E.P.C. system...	1,822.04	3,043.54	322.53	1,168.96	26.58
Total reserves.....	7,161.88	8,935.88	2,416.53	3,482.96	26.58
SURPLUS					
Debentures paid.....	8,472.79	8,853.50	424.50	580.38	253.67
Local sinking fund.....					
Additional operating surplus.....	12,097.47	14,373.16	5,764.02	7,646.50	
Total surplus.....	20,570.26	23,226.66	6,188.52	8,226.88	253.67
Total liabilities, reserves & surplus	33,841.35	37,938.37	15,394.64	18,158.50	24,393.72
Per cent of net debt to total assets.	18.0	16.6	44.1	38.0	100.0

“A”

of Hydro Municipalities as at December 31, 1922

Ancaster Township		Aylmer 2,251		Ayr 817		Baden Police Village	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
				125.00	125.00	660.64	660.64
14,679.75	15,333.76	15,080.80	15,803.88	6,533.25	6,770.51	4,495.58	4,517.59
3,630.52	4,238.77	3,976.48	4,535.16	1,428.39	1,428.39	1,815.52	1,815.52
5,388.68	6,003.06	5,720.13	6,402.89	1,585.59	1,995.56	1,290.53	1,691.88
626.81	626.81	1,124.55	1,124.55	360.27	360.27	370.02	370.02
1,147.70	1,147.70	1,051.86	1,051.86	785.49	785.49		
		14,719.17	14,719.17	4,006.03	4,005.53		
25,473.46	27,350.10	41,672.99	43,637.51	14,824.02	15,470.75	8,632.25	9,055.65
		2,286.73	615.29	160.88	886.07	2,888.77	6,315.96
		6,000.00	9,000.00	1,000.00	1,000.00		
346.69	90.03	301.42	1,856.67	1,486.21	1,520.03	2,818.80	53.55
		19.40	82.40	100.11	107.95	77.25	27.60
849.44	976.28		517.59	458.30	909.01	1,945.89	3,231.11
26,669.59	28,416.41	50,280.54	55,709.46	18,029.52	19,893.81	16,362.96	18,683.87
26,669.59	28,416.41	50,280.54	55,709.46	18,029.52	19,893.81	16,362.96	18,683.87
16,557.04	16,315.43	31,848.92	31,138.55	8,118.50	7,442.03	4,053.42	3,930.83
85.00	455.46	136.72	90.76		10.06		684.27
2,122.30	1,043.81						
18,764.34	17,814.70	31,985.64	31,229.31	8,118.50	7,452.09	4,053.42	4,615.10
2,221.00	2,918.00	2,891.38	3,545.38	2,935.00	3,262.00	2,112.52	2,373.52
849.44	976.28		517.59	458.30	909.01	1,945.89	3,231.11
3,070.44	3,894.28	2,891.38	4,062.97	3,393.30	4,171.01	4,058.41	5,604.63
442.96	684.57	6,853.00	7,563.37	4,384.88	5,061.35	946.58	1,069.17
4,391.85	6,022.86	8,550.52	12,853.81	2,132.84	3,209.36	7,304.55	7,394.97
4,834.81	6,707.43	15,403.52	20,417.18	6,517.72	8,270.71	8,251.13	8,464.14
26,669.59	28,416.41	50,280.54	55,709.46	18,029.52	19,893.81	16,362.96	18,683.87
70.3	65.0	63.4	56.5	45.0	39.2	24.8	29.8

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA
SYSTEM—Continued

Municipality Population	Barton Township		Beachville, Police Vil.		Belle River 580
	1921	1922	1921	1922	1922
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....			161.03	176.13	
Substation equipment.....					
Distribution system, overhead.....		42,639.98	7,061.22	7,256.07	8,123.23
Distribution system, underground.....					
Line transformers.....		5,962.69	1,714.74	1,714.74	1,853.20
Meters.....		11,513.41	1,559.10	1,781.26	1,058.01
Street light equipment, regular.....		212.01	287.10	355.87	631.92
Street light equip., ornamental.....					
Misc. construction expense.....		2,545.60	533.36	533.36	517.05
Steam or hydraulic plant.....					
Old plant.....					
Total plant.....	37,984.07	62,873.69	11,316.55	11,817.43	12,183.41
Bank and cash balance.....	3,472.87	2,275.21	2,252.27	1,743.66	
Securities and investments.....	18,000.00	7,000.00	9,000.00	9,000.00	
Accounts receivable.....	1,821.63		129.86	525.27	1,811.59
Inventories.....			146.57	91.06	
Sinking fund on local debentures.....					
Equity in Hydro systems.....			2,057.29	3,450.39	
Other assets.....					5.00
Total assets.....	61,278.57	72,148.90	24,902.54	26,627.81	14,000.00
Deficit.....		4,139.07			
Total.....	61,278.57	76,287.97	24,902.54	26,627.81	14,000.00
LIABILITIES					
Debenture balance.....	50,002.91	48,150.70	4,363.83	4,233.43	9,000.00
Accounts payable.....	7,493.37	20,381.31	885.77	931.07	
Bank overdraft.....					
Other liabilities.....					
Total liabilities.....	57,496.28	68,532.01	5,249.60	5,164.50	9,000.00
RESERVES					
For depreciation.....		2,484.00	3,740.00	4,019.50	5,000.00
For equity in H.E.P.C. system.....			2,057.29	3,450.39	
Total reserves.....		2,484.00	5,797.29	7,469.89	5,000.00
SURPLUS					
Debentures paid.....	1,202.79	5,271.96	989.17	1,119.57	
Local sinking fund.....					
Additional operating surplus.....	2,579.50		12,866.48	12,873.85	
Total surplus.....	3,782.29	5,271.96	13,855.65	13,993.42	
Total liabilities, reserves & surplus.....	61,278.57	76,287.97	24,902.54	26,627.81	14,000.00
Per cent of net debt to total assets.....	93.8	94.9	21.0	22.2	64.2

"A"—Continued

of Hydro Municipalities as at December 31, 1922

Blenheim 1,580		Bolton 658		Bothwell 613		Brampton 4,407	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
909.64	909.64					3,854.06	3,854.06
13,916.57	14,348.17	9,357.30	9,474.99	3,497.71	3,692.12	8,968.83	8,968.83
						37,141.76	38,397.13
5,322.33	5,438.02	5,816.65	5,816.65	1,269.52	1,299.02	13,395.45	14,682.67
4,751.15	5,290.29	2,493.64	2,641.54	1,923.55	2,146.58	13,573.50	14,841.43
1,122.43	1,171.87	561.14	561.14	326.10	332.95	2,106.16	2,167.44
1,492.13	1,492.13						
602.17	602.17	982.60	982.60	501.90	501.90	3,056.51	3,056.51
		1,554.60	1,554.60			15,000.00	15,000.00
28,116.42	29,252.29	20,765.93	21,031.52	7,518.78	7,972.57	97,096.27	100,968.07
				455.13	2,597.12	973.15	6,498.84
				2,000.00	2,000.00	33,276.00	31,985.26
513.20	1,320.49	233.50	163.58	753.93	1,657.60	1,152.97	246.64
217.84	88.00			47.35		310.30	416.34
677.84	1,777.10	931.08	1,761.92	3,014.90	1,684.69	6,425.03	10,549.96
				1,584.61	1,057.01		
29,525.30	32,437.88	21,930.51	22,957.02	15,374.70	16,968.99	139,233.73	150,665.11
		2,369.47	2,527.25				
29,525.30	32,437.88	24,299.98	25,484.27	15,374.70	16,968.99	139,233.72	150,665.11
12,764.78	12,513.58	10,962.24	10,654.47	4,558.84	4,469.13	50,251.94	47,736.29
	2,000.00	2,795.98	3,943.64		363.25	1,754.81	5,365.70
3,584.65	660.72	4,006.62	2,658.41				
1,482.97	1,482.97			1,584.61	1,057.01		
17,832.40	16,657.27	17,764.84	17,256.52	6,143.45	5,889.39	52,006.75	53,101.99
4,867.00	5,132.70	4,066.30	4,620.30	2,160.34	2,248.29	30,826.97	32,058.97
677.84	1,777.10	931.08	1,761.92	3,014.90	1,684.69	6,425.03	10,549.96
5,544.84	6,909.80	4,997.38	6,382.22	5,175.24	3,932.98	37,252.00	42,608.93
1,235.22	1,486.42	1,537.76	1,845.53	975.35	1,065.06	18,798.70	21,314.35
4,912.84	7,384.39			3,080.66	6,081.56	31,176.27	33,639.84
6,148.06	8,870.81	1,537.76	1,845.53	4,056.01	7,146.62	49,974.97	54,954.19
29,525.30	32,437.88	24,299.98	25,484.27	15,374.70	16,968.99	139,233.72	150,665.11
60.3	54.3	73.0	81.4	39.7	38.6	37.3	37.9

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA SYSTEM—Continued

Municipality Population	Brantford 31,362		Brantford Township		Brigden
	1921	1922	1921	1922	1921
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....	33,810.81	36,029.62			101.03
Substation equipment.....	93,903.12	107,829.95	902.33	1,297.71	
Distribution system, overhead....	156,667.59	170,410.18	30,147.88	36,453.17	5,400.55
Distribution system, underground					
Line transformers.....	63,445.60	75,093.73	8,031.08	10,057.35	1,122.63
Meters.....	69,334.32	76,994.06	6,083.50	6,776.02	1,360.69
Street light equipment, regular...	20,169.87	21,896.53	1,555.34	1,977.76	223.35
Street light equip., ornamental...	34,014.54	34,014.54			
Misc. construction expense.....	28,204.78	29,078.59	2,973.27	3,435.61	850.83
Steam or hydraulic plant.....					
Old plant.....					1,381.00
Total plant.....	499,550.63	551,347.20	49,693.40	59,997.62	10,440.08
Bank and cash balance.....	3,359.24	7,971.72	3,014.86	2,393.40	1,347.58
Securities and investments.....					
Accounts receivable.....	6,870.38	10,004.04	1,552.25	1,634.81	791.11
Inventories.....	825.49	943.45	167.48	248.78	34.29
Sinking fund on local debentures.	60,840.28	70,494.89	360.36	580.99	
Equity in Hydro systems.....	5,674.15	21,906.91			
Other assets.....					
Total assets.....	577,120.18	662,668.21	54,788.35	64,855.60	12,613.06
Deficit.....			1,313.00	1,555.53	
Total.....	577,120.18	662,668.21	56,101.35	66,411.13	12,613.06
LIABILITIES					
Debenture balance.....	377,500.00	398,750.00	45,006.34	51,194.25	4,339.33
Accounts payable.....	15,620.68	6,850.93	1,290.71	2,429.69	2,552.56
Bank overdraft.....					
Other liabilities.....	2,333.00	40,675.50			
Total liabilities.....	395,453.68	446,276.43	46,297.05	53,623.94	6,891.89
RESERVES					
For depreciation.....	68,152.90	78,209.68	5,243.96	6,274.79	982.00
For equity in H.E.P.C. system...	5,674.15	21,906.91			
Total reserves.....	73,827.05	100,116.59	5,243.96	6,274.79	982.00
SURPLUS					
Debentures paid.....		6,250.00	4,199.98	5,931.41	3,660.67
Local sinking fund.....	60,840.28	70,494.89	360.36	580.99	
Additional operating surplus.....	46,999.17	39,530.30			1,078.50
Total surplus.....	107,839.45	116,275.19	4,560.34	6,512.40	4,739.17
Total liabilities, reserves & surplus	577,120.18	662,668.21	56,101.35	66,411.13	12,613.06
Per cent of net debt to total assets.	68.5	75.4	82.5	82.6	54.0

“A”—Continued

of Hydro Municipalities as at December 31, 1922

Police Village	Burford Police Village		Burgessville Police Vil.		Caledonia 1,335	
1922	1921	1922	1921	1922	1921	1922
\$ c. 101.03	\$ c. 202.00	\$ c. 202.00	\$ c.	\$ c.	\$ c.	\$ c.
5,448.50	4,921.25	5,424.76	2,179.73	2,191.96	7,125.68	7,554.03
1,122.63	1,137.08	1,176.96	567.81	567.81	1,304.57	1,304.57
1,446.50	1,710.03	2,090.81	569.66	606.14	1,783.48	2,063.21
223.35	282.02	282.02	156.07	156.07	605.89	662.35
850.83	671.00	671.00	453.00	453.00	473.20	473.20
1,381.00						
10,573.84	8,923.38	9,847.55	3,926.27	3,974.98	11,292.82	12,057.36
683.66	70.39	580.58	417.98	1,171.28	1,337.27	171.73
942.73	220.00	999.42	865.60			1,000.00
	29.77			8.75		108.69
203.42	283.82	709.09	32.52	137.37	569.67	866.07
12,403.65	9,527.36	12,136.64	5,242.37	5,292.38	13,199.76	14,203.85
	276.17					
12,403.65	9,803.53	12,136.64	5,242.37	5,292.38	13,199.76	14,203.85
3,712.67	3,768.83	3,575.84	2,835.67	2,700.62	3,916.58	3,789.86
1,832.27	2,897.29	2,613.68		229.61	35.88	70
	4.42					
5,544.94	6,670.54	6,189.52	2,835.67	2,930.23	3,952.46	3,790.56
1,185.00	1,618.00	1,856.00	801.00	891.30	2,666.76	2,904.76
203.42	283.82	709.09		137.37	569.67	866.07
1,388.42	1,901.82	2,565.09	801.00	1,028.67	3,236.43	3,770.83
4,287.33	1,231.17	1,424.16	664.33	799.38	707.42	834.14
1,182.96		1,957.87	941.37	534.10	5,303.45	5,808.32
5,470.29	1,231.17	3,382.03	1,605.70	1,333.48	6,010.87	6,642.46
12,403.65	9,803.53	12,136.64	5,242.37	5,292.38	13,199.76	14,203.85
45.5	68.0	54.1	54.0	56.9	29.9	28.4

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA
SYSTEM—Continued

Municipality	Chatham		Chippawa		Clinton
Population	15,084		1,029		1,941
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....	39,013.28	39,351.72			
Substation equipment.....	46,123.86	51,254.64			7,738.47
Distribution system, overhead....	95,734.86	104,296.57	11,755.22	12,173.03	14,364.10
Distribution system, underground					
Line transformers.....	49,826.94	58,781.42	1,819.08	2,270.32	3,503.27
Meters.....	50,361.08	54,022.80	1,671.65	1,981.90	4,838.85
Street light equipment, regular...	7,853.65	7,853.65	509.78	518.78	907.82
Street light equip., ornamental...	26,907.19	26,907.19			
Misc. construction expense.....	23,420.52	30,390.39	794.52	794.52	3,312.45
Steam or hydraulic plant.....					
Old plant.....	22,940.00	27,328.85			10,784.59
Total plant.....	362,181.38	400,187.23	16,550.25	17,738.55	45,449.55
Bank and cash balance.....	50.00	50.00	86.86	169.96	3,707.94
Securities and investments.....					
Accounts receivable.....	47,286.72	47,807.30	821.19	946.06	578.81
Inventories.....	28,140.01	27,188.36			2,554.72
Sinking fund on local debentures.					7,419.74
Equity in Hydro systems.....	3,125.62	13,292.48		240.71	1,213.75
Other assets.....					
Total assets.....	440,783.73	488,525.37	17,458.30	19,095.28	60,924.51
Deficit.....					
Total.....	440,783.73	488,525.37	17,458.30	19,095.28	60,924.51
LIABILITIES.					
Debenture balance.....	296,854.25	273,966.34	12,917.12	12,543.09	40,500.00
Accounts payable.....	22,377.56	49,083.57	1,571.29	617.67	
Bank overdraft.....	22,229.38	30,295.46			
Other liabilities.....		1,986.00		157.28	
Total liabilities.....	341,461.19	355,331.37	14,488.41	13,318.04	40,500.00
RESERVES					
For depreciation.....	36,940.00	44,267.00	941.76	1,123.66	8,116.00
For equity in H.E.P.C. system...	3,125.62	13,292.48		240.71	1,213.75
Total reserves.....	40,065.62	57,559.48	941.76	1,364.37	9,329.75
SURPLUS					
Debentures paid.....	18,121.65	22,668.87	432.88	806.91	
Local sinking fund.....					7,419.74
Additional operating surplus.....	41,135.27	52,965.65	1,595.25	3,605.96	3,675.02
Total surplus.....	59,256.92	75,634.52	2,028.13	4,412.87	11,094.76
Total liabilities, reserves & surplus	440,783.73	488,525.37	17,458.30	19,095.28	60,924.51
Per cent of net debt to total assets.	77.4	74.8	83.0	70.6	66.4

“A”—Continued
of Hydro Municipalities as at December 31, 1922

Clinton	Comber Police Village		Dashwood Police Village		Delaware Police Village	
1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
7,544.43						
15,196.21	4,398.98	4,642.29	1,828.02	1,828.02	2,177.09	2,206.59
4,900.12	2,395.14	2,542.72	953.68	953.68	216.75	216.75
5,317.45	1,286.45	1,433.24	884.50	886.30	503.14	568.02
907.82	199.55	199.55	189.00	277.22	106.93	106.93
3,406.50	957.54	957.54	291.87	291.87	203.81	203.81
10,736.09						
48,008.62	9,237.66	9,775.34	4,147.07	4,237.09	3,207.72	3,302.10
3,713.50	1,218.26		240.76	1.40	283.20	615.11
267.05	19.25	19.25	25.24	5.24	1,505.60	1,924.89
2,665.12	58.44	105.15				
8,392.23						
2,475.36	368.01	956.46		138.31	73.12	180.00
65,521.88	10,901.62	10,856.20	4,413.07	4,382.04	5,069.64	6,022.10
	1,640.41					
65,521.88	12,542.03	10,856.20	4,413.07	4,382.04	5,069.64	6,022.10
40,500.00	6,225.17	5,898.12	3,138.38	3,076.77	3,509.71	3,424.98
369.30	3,055.02	172.36	116.59	20.39	154.27	257.60
		13.73				
40,869.30	9,280.19	6,084.21	3,254.97	3,097.16	3,663.98	3,682.58
8,991.00	1,419.00	1,646.00	633.00	701.13	734.00	828.00
2,475.36	368.01	956.46		138.31	73.12	180.00
11,466.36	1,787.01	2,602.46	633.00	839.44	807.12	1,008.00
	1,474.83	1,801.88	261.62	323.23	490.29	575.02
8,392.23						
4,793.99		367.65	263.48	122.21	108.25	756.50
13,186.22	1,474.83	2,169.53	525.10	445.44	598.54	1,331.52
65,521.88	12,542.03	10,856.20	4,413.07	4,382.04	5,069.64	6,022.10
65.0	73.9	61.4	73.7	74.7	72.2	63.2

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA SYSTEM—Continued

Municipality Population	Dereham Township		Dorchester Police V.		Drayton 618
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....					
Substation equipment.....					
Distribution system, overhead...	9,500.75	9,358.70	3,356.54	3,774.28	5,760.05
Distribution system, underground					
Line transformers.....	11,317.74	11,531.75	1,964.01	2,509.68	1,480.35
Meters.....	3,012.84	3,172.30	1,357.42	1,607.07	1,821.29
Street light equipment, regular...			212.34	212.34	567.13
Street light equip., ornamental...					
Misc. construction expense.....	483.26	494.46	328.41	328.41	388.37
Steam or hydraulic plant.....					
Old plant.....					
Total plant.....	24,314.59	24,557.21	7,218.72	8,431.78	10,017.19
Bank and cash balance.....	627.03	1,523.58	321.72	1,505.54	2,404.38
Securities and investments.....					
Accounts receivable.....	300.00	409.09	973.81	652.84	122.02
Inventories.....					
Sinking fund on local debentures...					
Equity in Hydro systems.....	2,096.72	2,882.42	151.24	307.14	
Other assets.....					
Total assets.....	27,338.34	29,372.30	8,665.49	10,897.30	12,543.59
Deficit.....	4,214.19	5,198.37			
Total.....	31,552.53	34,570.67	8,665.49	10,897.30	12,543.59
LIABILITIES					
Debenture balance.....	20,703.38	20,001.12	3,859.78	3,773.06	8,960.35
Accounts payable.....	4,445.43	5,719.96	36.91		
Bank overdraft.....					
Other liabilities.....					
Total liabilities.....	25,148.81	25,721.08	3,896.69	3,773.06	8,960.35
RESERVES					
For depreciation.....	4,307.00	5,264.91	1,446.70	1,639.70	1,427.00
For equity in H.E.P.C. system...	2,096.72	2,882.42	151.24	307.14	
Total reserves.....	6,403.72	8,147.33	1,597.94	1,946.84	1,427.00
SURPLUS					
Debentures paid.....		702.26	440.22	526.94	539.65
Local sinking fund.....					
Additional operating surplus.....			2,730.64	4,650.46	1,616.59
Total surplus.....		702.26	3,170.86	5,177.40	2,156.24
Total liabilities, reserves & surplus	31,552.53	34,570.67	8,665.49	10,897.30	12,543.59
Per cent of net debt to total assets.	92.0	97.1	44.9	35.6	71.5

" A "—Continued

of Hydro Municipalities as at December 31, 1922

Drayton	Dresden 1,456		Drumbo Police Village		Dublin Police Village	
1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	523.00	523.00	.....	.....	85.00	85.00
5,931.33	8,391.39	9,690.73	2,825.45	3,041.57	4,010.35	4,046.00
1,787.93	3,887.44	4,979.13	457.46	457.46	660.75	660.75
1,957.17	4,073.30	4,237.41	913.68	932.05	520.46	520.46
567.13	828.62	828.62	129.89	201.80	417.71	417.71
388.37	408.09	408.09	235.58	235.58	762.41	787.06
.....	4,815.26	4,815.01	.....	.....	.....	.....
10,631.93	22,927.10	25,481.99	4,562.06	4,868.46	6,456.68	6,516.98
1,482.53	2,770.49	4,015.94	217.86	263.79	48.18	130.86
2,000.00	.....	.....	600.00	600.00	.....	.....
361.24	1,681.29	182.14	375.10	873.68	168.05	157.36
.....	1,229.38	883.61	.....	2.40	39.55	39.55
146.63	366.75	1,317.18	237.45	393.45	.....	79.15
.....
14,622.33	28,975.01	31,880.86	5,992.47	7,001.78	6,712.46	6,923.90
.....	.....	.....	.....	.....	1,061.58	1,050.65
14,622.33	28,975.01	31,880.86	5,992.47	7,001.78	7,774.04	7,974.55
8,822.61	11,850.79	11,055.81	3,948.51	3,853.20	5,348.14	5,106.08
.....	.....	.....	20.00	.....	692.04	671.40
.....
8,822.61	11,850.79	11,055.81	3,968.51	3,853.20	6,040.18	5,777.48
1,683.00	3,604.00	3,921.00	1,030.00	1,161.00	882.00	1,024.00
146.63	366.75	1,317.18	237.45	393.45	.....	79.15
1,829.63	3,970.75	5,238.18	1,267.45	1,554.45	882.00	1,103.15
677.39	4,387.46	5,182.44	551.49	646.80	851.86	1,093.92
3,292.70	8,766.01	10,404.43	205.02	947.33	.....	.....
3,970.09	13,153.47	15,586.87	756.51	1,594.13	851.86	1,093.92
14,622.33	28,975.01	31,880.86	5,992.47	7,001.78	7,774.04	7,974.55
61.0	40.8	36.2	66.3	58.2	90.1	85.8

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA
SYSTEM—Continued

Municipality	Dundas		Dunnville		Dutton
Population	5,100		3,583		845
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....	8,519.52	8,519.52	3,379.78	3,379.78	.....
Substation equipment.....	6,624.07	6,745.29	16,916.68	16,916.68	.....
Distribution system, overhead...	44,822.49	45,826.38	25,659.26	26,348.79	6,571.24
Distribution system, underground	.....	.....	.....	.....	.....
Line transformers.....	12,435.36	13,678.83	7,507.59	9,630.95	2,032.78
Meters.....	14,815.28	15,758.24	5,385.18	6,201.44	2,643.61
Street light equipment, regular...	1,736.00	1,736.00	2,320.25	2,320.25	513.51
Street light equip., ornamental...	.....	.....	4,767.47	4,767.47	.....
Misc. construction expense.....	6,041.84	7,175.84	4,852.51	4,988.29	288.17
Steam or hydraulic plant.....	.....	.....	.....	.....	.....
Old plant.....	1,867.38	1,867.38	10,717.62	10,717.62	.....
Total plant.....	96,861.94	101,307.48	81,506.34	85,271.27	12,049.31
Bank and cash balance.....	2,654.72	5,101.36	.....	.....	1,740.45
Securities and investments.....	.....	.....	.....	.....	2,000.00
Accounts receivable.....	2,635.53	1,307.56	2,025.65	2,960.33	31.29
Inventories.....	1,748.53	3,341.36	759.76	599.87	217.60
Sinking fund on local debentures.	.....	.....	.....	.....	.....
Equity in Hydro systems.....	5,012.03	9,359.88	.....	749.44	287.89
Other assets.....	.....	.....	.....	.....	.....
Total assets.....	108,912.75	120,417.64	84,291.75	89,580.91	16,326.54
Deficit.....	.....	.....	.....	.....	.....
Total.....	108,912.75	120,417.64	84,291.75	89,580.91	16,326.54
LIABILITIES					
Debenture balance.....	44,971.55	43,791.37	61,395.21	60,320.43	7,785.74
Accounts payable.....	1,764.92	4,638.76	9,844.11	6,532.03	.....
Bank overdraft.....	.....	.....	1,258.70	1,517.33	.....
Other liabilities.....	.....	.....	.....	.....	.....
Total liabilities.....	46,736.47	48,430.13	72,498.02	68,369.79	7,785.74
RESERVES					
For depreciation.....	27,714.13	27,182.06	7,079.56	8,716.56	2,515.00
For equity in H.E.P.C. system...	5,012.03	9,359.88	.....	749.44	289.89
Total reserves.....	32,726.16	36,541.94	7,079.56	9,466.00	2,802.89
SURPLUS					
Debentures paid.....	8,028.45	9,208.63	4,104.79	5,179.57	621.75
Local sinking fund.....	.....	.....	.....	.....	.....
Additional operating surplus.....	21,421.67	26,236.94	609.38	6,565.55	5,116.16
Total surplus.....	29,450.12	35,445.57	4,714.17	11,745.12	5,737.91
Total liabilities, reserves & surplus	108,912.75	120,417.64	84,291.75	89,580.91	16,326.54
Per cent of net debt to total assets.	42.9	43.5	86.0	77.0	47.7

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

Dutton	Elmira 2,370		Elora 1,091		Embro 463	
1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	3,837.29	4,396.24	.....	.....	.....	.....
6,718.72	15,141.97	16,917.74	11,267.83	11,873.35	5,789.81	5,873.51
2,039.78	5,525.68	7,161.75	4,733.89	4,847.63	1,236.92	1,775.29
2,708.45	5,902.29	6,791.44	3,070.86	3,540.77	1,161.49	1,271.59
516.26	713.14	865.76	501.34	501.34	209.29	209.29
288.17	2,359.90	2,129.07	926.18	926.18	69.45	69.45
.....	2,325.08	2,325.08	1,425.47	1,425.47	429.25	429.25
12,271.38	35,805.35	40,587.08	21,925.57	23,114.74	8,896.21	9,628.38
3,047.38	1,135.68	1,100.68	324.53	1,343.50	248.55	2.27
1,500.00	.....	.....	.....	.....	1,000.00	1,000.00
112.65	1,984.97	1,548.71	1,195.03	1,734.98	.....	.....
172.05	1,642.63	2,051.04	878.77	704.00	31.82	.....
916.73	1,880.69	3,511.03	1,443.90	2,751.15	662.38	1,142.99
.....
18,020.19	42,449.32	48,798.54	25,767.80	29,648.37	10,838.96	11,773.64
.....	.....	.....	.....	.....	2,006.60	1,031.37
18,020.19	42,449.32	48,798.54	25,767.80	29,648.37	12,845.56	12,805.01
7,606.32	17,496.15	17,092.94	10,519.05	10,097.03	7,079.99	6,850.91
.....	.....	.....	.....	.....	2,322.18	1,646.63
.....	.....	92.00	.....	.....	.....	.....
7,606.32	17,496.15	17,184.94	10,519.05	10,097.03	9,402.17	8,497.54
2,852.00	7,471.00	8,009.39	4,794.00	5,443.90	2,361.00	2,515.39
916.73	1,880.69	3,511.03	1,443.90	2,751.15	662.38	1,142.99
3,768.73	9,351.69	11,520.42	6,237.90	8,195.05	3,023.38	3,658.38
801.17	2,503.85	2,907.06	2,480.95	2,902.97	420.01	649.09
5,843.97	13,097.63	17,186.12	6,529.90	8,453.32	.....	.....
6,645.14	15,601.48	20,093.18	9,010.85	11,356.29	420.01	649.09
18,020.19	42,449.32	48,798.54	25,767.80	29,648.37	12,845.56	12,805.01
44.4	41.2	37.9	40.8	37.5	86.7	79.9

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA
SYSTEM—Continued

Municipality Population	Etobicoke Township		Exeter 1,507		Fergus 1,762
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....				2,319.50	
Substation equipment.....					
Distribution system, overhead....	45,656.59	69,211.75	13,004.36	14,004.07	15,553.46
Distribution system, underground					
Line transformers.....	13,064.56	20,253.14	3,418.11	3,877.91	5,602.98
Meters.....	17,469.36	25,653.72	4,108.96	4,412.75	5,563.45
Street light equipment, regular...	2,076.11	3,818.23	732.08	828.13	1,249.57
Street light equip., ornamental....					
Misc. construction expense.....	3,342.10	2,918.86	1,549.48	1,559.48	645.37
Steam or hydraulic plant.....					
Old plant.....					2,546.59
Total plant.....	81,608.72	121,855.70	22,812.99	27,001.84	31,161.42
Bank and cash balance.....		50.00	4,324.90	134.66	
Securities and investments.....			3,000.00	3,000.00	
Accounts receivable.....	7,790.44	3,085.33	1,451.31	3,321.54	440.37
Inventories.....	283.77	576.66	1,899.86	2,015.62	4,694.88
Sinking fund on local debentures.					
Equity in Hydro systems.....	5,611.05	7,924.87		3,069.88	1,072.85
Other assets.....		105.40			
Total assets.....	95,293.98	133,597.96	33,489.06	38,543.54	37,369.52
Deficit.....					
Total.....	95,293.98	133,597.96	33,489.06	38,543.54	37,369.52
LIABILITIES					
Debenture balance.....	41,158.81	69,617.84	17,149.70	16,588.13	14,173.94
Accounts payable.....		1,150.95	1,120.95	1,699.96	1,107.75
Bank overdraft.....	10,136.64	4,079.21			9,976.41
Other liabilities.....	519.50	1,003.25			
Total liabilities.....	51,814.95	75,851.25	18,270.65	18,288.09	25,258.10
RESERVES					
For depreciation.....	19,154.82	22,686.82	3,964.00	4,406.20	5,090.00
For equity in H.E.P.C. system....	5,611.05	7,924.87		3,069.88	1,072.85
Total reserves.....	24,765.87	30,611.69	3,964.00	7,476.08	6,162.85
SURPLUS					
Debentures paid.....	4,841.19	6,382.16	2,850.35	3,411.92	1,826.06
Local sinking fund.....					
Additional operating surplus.....	13,871.97	20,752.86	8,404.06	9,367.45	4,122.51
Total surplus.....	18,712.16	27,135.02	11,254.41	12,779.37	5,948.57
Total liabilities, reserves & surplus	95,293.98	133,597.96	33,489.06	38,543.54	37,369.52
Per cent of net debt to total assets.	54.3	60.4	54.5	51.5	67.7

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

Fergus	Ford City	Forest		Galt		Georgetown	
	5,113	1,422		13,332		2,098	
1922	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	.....	4,500.00	5,276.15	134,697.10	192,108.00	12.00	12.00
16,633.58	40,431.14	12,162.06	13,212.84	108,663.85	132,295.63	.....	.....
7,637.33	16,744.01	2,761.27	3,319.88	34,962.04	39,749.01	7,466.81	7,639.13
6,543.98	15,010.87	5,888.36	6,271.31	46,543.51	48,982.34	6,826.26	7,615.42
1,249.57	.....	1,824.15	1,967.89	9,198.82	10,727.88	1,058.68	1,108.60
660.37	362.28	303.85	342.85	62,842.77	59,985.10	.....	.....
2,546.59	.....	11,084.87	11,084.87	16,942.05	27,230.98	1,458.15	1,509.08
.....	.....	.....	.....	.....	.....	2,209.80	2,209.80
35,271.42	72,548.30	38,524.56	41,475.79	577,023.42	690,913.39	39,562.54	41,066.27
.....	.....	459.71	1,489.05	25.00	175.00	224.64	3,129.29
.....	.....	2,000.00	2,000.00	350.00	650.00	15,064.63	14,953.36
5,464.51	2,294.22	447.01	2,406.61	203,243.32	52,211.40	2,580.44	3,133.57
2,869.99	.....	4,376.77	3,168.28	35,536.21	23,957.22	1,160.20	1,432.13
2,195.05	.....	.....	347.98	66,629.05	76,203.24	.....	.....
99.96	.....	.....	.....	19,217.32	32,525.95	5,413.08	7,340.99
45,900.93	74,842.52	45,808.05	50,887.71	2,281.67	883.63	.....	.....
.....	.....	.....	.....	904,305.99	877,519.83	64,005.53	71,055.61
45,900.93	74,842.52	45,808.05	50,887.71	904,305.99	877,519.83	64,005.53	71,055.61
13,852.61	63,000.00	25,611.24	24,172.18	388,579.18	387,565.04	17,496.12	17,092.91
459.00	7,312.68	270.12	1,369.89	3,859.04	133,406.51	.....	.....
14,878.57	.....	.....	.....	232,649.78	55,221.59	.....	.....
.....	.....	.....	.....	.....	1,500.00	.....	.....
29,190.18	70,312.68	25,881.36	25,542.07	625,088.00	577,693.14	17,496.12	17,092.91
5,875.00	2,877.17	4,208.00	4,381.97	75,610.58	82,288.81	12,365.63	13,487.93
2,195.05	.....	.....	347.98	19,217.32	32,525.95	5,413.08	7,340.99
8,070.05	2,877.17	4,208.00	4,729.95	94,827.90	114,814.76	17,778.71	20,828.92
2,147.39	.....	8,788.76	10,227.82	.....	5,436.91	2,503.88	2,907.09
6,493.31	1,652.67	6,929.93	10,387.87	66,629.05	76,203.24	26,226.82	30,226.69
8,640.70	1,652.67	15,718.69	20,615.69	117,761.04	103,371.78	28,730.70	33,133.78
45,900.93	74,842.52	45,808.05	50,887.71	184,390.09	185,011.93	64,005.53	71,055.61
66.9	94.0	56.5	50.6	69.2	68.4	27.4	26.8

STATEMENT
Comparative Balance Sheets of Electrical Departments

NIAGARA
SYSTEM—Continued

Municipality	Glencoe		Goderich		Grantham
Population	835		4,108		
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....			12,915.81	12,957.48	
Substation equipment.....			9,795.28	9,795.28	
Distribution system, overhead....	14,073.20	14,402.51	37,174.31	41,065.90	8,410.77
Distribution system, underground					
Line transformers.....	2,674.83	2,846.37	10,407.39	11,598.20	4,282.71
Meters.....	2,352.99	2,722.97	10,481.96	11,506.40	1,934.80
Street light equipment, regular....	1,630.56	1,630.56	4,231.71	4,244.76	
Street light equip., ornamental....					
Misc. construction expense.....	2,991.70	3,179.01	4,005.81	4,016.70	267.30
Steam or hydraulic plant.....					
Old plant.....			14,622.15	14,622.15	
Total plant.....	23,723.28	24,781.42	103,634.42	109,806.87	14,895.58
Bank and cash balance.....	1,452.20	1,559.50	3,671.23		807.60
Securities and investments.....					
Accounts receivable.....	489.52	1,204.01	7,105.53	10,262.48	2,928.11
Inventories.....	132.87		827.00	2,030.00	
Sinking fund on local debentures.	660.28	1,188.50	4,513.23	4,809.66	1,847.68
Equity in Hydro systems.....		155.21	4,449.46	8,143.96	3,569.57
Other assets.....					
Total assets.....	26,458.15	28,888.64	124,200.87	135,052.97	24,048.54
Deficit.....					58.97
Total.....	26,458.15	28,888.64	124,200.87	135,052.97	24,107.51
LIABILITIES					
Debenture balance.....	19,596.65	19,052.03	41,521.68	39,184.51	10,793.72
Accounts payable.....	1,749.42	697.21	11,443.26	14,969.36	5,774.36
Bank overdraft.....				1,447.46	
Other liabilities.....					
Total liabilities.....	21,346.07	19,749.24	52,964.94	55,601.33	16,568.08
RESERVES					
For depreciation.....	806.00	1,259.00	25,420.00	28,049.00	1,915.90
For equity in H.E.P.C. system....		155.21	4,449.46	8,143.96	3,569.57
Total reserves.....	806.00	1,414.21	29,869.46	36,192.96	5,485.47
SURPLUS					
Debentures paid.....	516.23	1,060.85	14,566.37	16,903.54	206.28
Local sinking fund.....	660.28	1,188.50	4,513.23	4,809.66	1,847.68
Additional operating surplus.....	3,129.57	5,475.84	22,286.87	21,545.48	
Total surplus.....	4,306.08	7,725.19	41,366.47	43,258.68	2,053.96
Total liabilities, reserves & surplus	26,458.15	28,888.64	124,200.87	135,052.97	24,107.51
Per cent of net debt to total assets.	80.5	68.8	42.8	43.8	68.8

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

Township	Granton Police Village		Guelph		Hagersville	
			18,027		1,271	
1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	.....	.....	12,004.40	12,004.40	.....	.....
.....	.....	.....	80,154.72	81,167.10	833.52	833.52
9,140.73	3,065.64	3,100.64	98,491.64	107,601.34	12,145.20	12,592.63
.....
4,687.85	623.16	623.16	50,534.80	56,241.03	2,768.60	2,879.21
2,291.01	908.55	908.55	46,647.51	48,861.51	4,261.59	4,331.37
.....	149.27	149.27	28,404.89	30,681.34	608.30	608.30
.....
267.30	110.28	110.28	11,950.43	13,172.74	140.20	140.20
.....
.....
16,386.89	4,856.90	4,891.90	328,188.39	349,729.46	20,757.41	21,385.23
.....
633.04	1,313.65	2,497.32	.....	62.50	240.54	56.42
.....	.....	.....	5,000.00	25,000.00	4,500.00	2,000.00
2,853.33	291.92	148.22	27,658.69	22,033.33	1,946.94	2,180.91
.....	.....	.....	34,070.32	30,955.26	92.45	79.25
2,190.95	.....	.....	19,573.79	21,264.55	.....	.....
4,221.57	.....	318.68	17,731.62	33,586.21	1,303.07	3,460.74
.....	.....	.....	.....	4,466.00	.....	.....
.....
26,285.78	6,462.47	7,856.12	432,260.31	487,097.31	28,840.41	29,162.55
.....
26,285.78	6,462.47	7,856.12	432,260.31	487,097.31	28,840.41	29,162.55
.....
10,681.99	3,191.19	3,128.39	95,884.91	93,079.38	6,645.16	6,426.62
5,957.33	580.03	592.78	18,550.40	30,877.06	4,330.64	.....
.....	.....	.....	12,531.67	23,957.33	.....	.....
.....	.....	.....	.....	915.86	.....	.....
.....
16,639.32	3,771.22	3,721.17	126,966.98	148,829.63	10,975.80	6,426.62
.....
.....
2,847.90	949.00	1,082.00	70,247.76	71,041.97	869.98	323.44
4,221.57	.....	318.68	17,731.62	33,586.21	1,303.07	3,460.74
.....
7,069.47	949.00	1,400.68	87,979.38	104,628.18	2,173.05	3,784.18
.....
.....
318.01	308.81	371.61	49,115.08	51,920.61	1,354.84	1,573.38
2,190.95	.....	.....	19,573.79	21,264.55	.....	.....
68.03	1,433.44	2,362.66	148,625.08	160,454.34	14,336.72	17,378.37
.....
2,576.99	1,742.25	2,734.27	217,313.95	233,639.50	15,691.56	18,951.75
.....
26,285.78	6,462.47	7,856.12	432,260.31	487,097.31	28,840.41	29,162.55
.....
.....
75.4	58.3	49.3	29.4	32.8	38.1	25.0

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA
SYSTEM—Continued

Municipality	Hamilton		Harriston		Hensall
Population	118,243		1,311		738
	1921	1922	1921	1922	1921
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....	102,950.78	170,721.82	.....	.....	.....
Substation equipment.....	150,916.97	153,702.90	600.00	600.00	.....
Distribution system, overhead....	496,895.62	583,755.83	8,806.06	9,238.70	6,811.02
Distribution system, underground	182,013.14	184,371.80	.....	.....	.....
Line transformers.....	219,842.43	250,391.36	3,762.20	3,762.20	2,250.85
Meters.....	252,317.69	281,884.27	3,456.55	3,683.22	1,928.71
Street light equipment, regular...	96,923.91	101,873.59	350.00	350.00	436.67
Street light equip., ornamental....	.....	.....	.....	.....	.....
Misc. construction expense.....	143,356.86	141,027.72	458.07	458.07	447.50
Steam or hydraulic plant.....	.....	.....	.....	.....	.....
Old plant.....	.....	.....	1,130.83	1,130.83	400.00
Total plant.....	1,645,217.40	1,867,729.29	18,563.71	19,223.02	12,274.75
Bank and cash balance.....	.....	119,081.21	.....	139.73	2,066.35
Securities and investments.....	.....	.....	.....	.....	.....
Accounts receivable.....	179,456.99	184,106.98	2,385.96	2,308.38	74.00
Inventories.....	91,235.96	92,042.30	3,104.86	598.17	20.00
Sinking fund on local debentures.	207,194.80	238,251.14	.....	.....	.....
Equity in Hydro systems.....	51,280.92	115,574.00	.....	1,306.13	.....
Other assets.....	4,645.35	3,844.57	.....	.....	.....
Total assets.....	2,179,031.42	2,620,629.49	24,054.53	23,575.43	14,435.10
Deficit.....	.....	.....	986.67	.....	246.83
Total.....	2,179,031.42	2,620,629.49	25,041.20	23,575.43	14,681.93
LIABILITIES					
Debenture balance.....	996,537.12	1,489,920.31	10,711.78	9,470.62	11,116.72
Accounts payable.....	120,607.21	191,988.85	6,607.20	3,476.35	385.93
Bank overdraft.....	251,428.79	.....	2,713.97	.....	.....
Other liabilities.....	31,705.70	50,062.01	.....	.....	.....
Total liabilities.....	1,400,278.82	1,731,971.17	20,032.95	12,946.97	11,502.65
RESERVES					
For depreciation.....	353,718.56	378,583.02	2,402.00	3,387.40	2,296.00
For equity in H.E.P.C. system....	*56,062.92	115,574.00	.....	1,306.13	.....
Total reserves.....	409,781.48	494,157.02	2,402.00	4,693.53	2,296.00
SURPLUS					
Debentures paid.....	23,462.88	30,079.69	2,606.25	3,847.41	883.28
Local sinking fund.....	207,194.80	238,251.14	.....	.....	.....
Additional operating surplus.....	138,313.44	126,170.47	.....	2,087.52	.....
Total surplus.....	368,971.12	394,501.30	2,606.25	5,934.93	883.28
Total liabilities, reserves & surplus	2,179,031.42	2,620,629.49	25,041.20	23,575.43	14,681.93
Per cent of net debt to total assets.	64.3	69.1	83.2	58.2	78.4

* Includes \$4,782.00 Reserve for Insurance.

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

Hensall	Hespeler 2,853		Highgate 417		Ingersoll 5,253	
1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	3,504.43	3,521.37	.....	.....	6,357.57	6,357.57
.....	8,507.47	12,917.81	.....	.....	10,302.31	10,302.31
6,933.32	17,858.88	20,884.18	3,640.97	3,878.07	38,535.91	40,568.97
.....
2,250.85	9,149.16	9,415.26	1,488.37	1,488.37	12,458.77	14,354.72
2,286.92	7,523.93	8,879.19	1,124.45	1,200.60	17,504.67	18,588.61
436.67	1,572.22	1,578.22	294.56	294.56	2,739.29	2,762.09
.....	.....	.....	.....	.....	4,597.59	4,597.59
447.50	93.08	623.33	476.51	476.51	8,629.55	8,517.40
.....
400.00	2,230.00	1,817.50	.....	.....	20,607.25	20,389.38
.....
12,755.26	50,439.17	59,636.86	7,024.86	7,338.11	121,732.91	126,438.64
.....
2,957.53	.....	375.34	696.91	1,811.51	.....	.....
.....	1,088.09	559.89	.....	.....	20,500.00	20,500.00
15.14	481.09	936.06	307.50	140.81	22,105.55	7,190.08
.....	.....	.....	87.47	38.03	1,304.87	3,546.24
.....	3,045.33	.....	.....	.....	22,650.57	25,530.86
979.35	.....	4,866.18	.....	358.35	7,978.83	12,933.86
.....
16,707.28	55,053.68	66,374.33	8,116.74	9,686.81	196,272.73	196,139.68
424.04	.....	.....	.....	.....	.....	.....
.....
17,131.32	55,053.68	66,374.33	8,116.74	9,686.81	196,272.73	196,139.68
.....
10,875.15	15,264.21	28,878.71	4,584.15	4,488.11	79,800.00	79,800.00
1,606.52	761.73	4,572.21	.....	.....	2,510.22	.....
.....	4,080.52	.....	.....	.....	8,883.37	2,864.43
.....	.....	.....	.....	.....	4,597.59	4,597.59
.....
12,481.67	20,106.46	33,450.92	4,584.15	4,488.11	95,791.18	87,262.02
.....
2,545.45	10,127.76	3,713.05	1,056.00	1,232.00	20,139.63	20,361.77
979.35	3,045.33	4,866.18	.....	358.35	7,978.83	12,933.86
.....
3,524.80	13,173.09	8,579.23	1,056.00	1,590.35	28,118.46	33,295.63
.....
1,124.85	17,306.30	18,691.80	415.85	511.89	.....	.....
.....	.....	.....	.....	.....	22,650.57	25,530.86
.....	4,467.83	5,652.38	2,060.74	3,096.46	49,712.52	50,051.17
.....
1,124.85	21,774.13	24,344.18	2,476.59	3,608.35	72,363.09	75,582.03
.....
17,131.32	55,053.68	66,374.33	8,116.74	9,686.81	196,272.73	196,139.68
.....
79.4	36.6	54.4	56.5	48.2	48.7	47.6

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA SYSTEM—Continued

Municipality	Kitchener		Lambeth Police Vil.		Listowel
Population	22,717				2,429
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....	46,364.28	46,676.23			1,229.07
Substation equipment.....	117,036.88	117,591.71			
Distribution system, overhead...	132,947.30	149,459.27	2,911.58	4,979.89	25,765.67
Distribution system, underground	9,444.68	13,008.52			
Line transformers.....	74,881.00	85,165.98	288.86	657.71	11,929.62
Meters.....	84,368.77	92,240.20	1,129.02	1,515.55	9,334.60
Street light equipment, regular...	25,789.11	26,280.22	159.37	167.40	2,238.10
Street light equip., ornamental...					5,780.22
Misc. construction expense.....	9,334.03	9,477.77	214.73	300.71	1,362.71
Steam or hydraulic plant.....					
Old plant.....	52,536.31	52,498.91			4,750.70
Total plant.....	552,602.36	592,398.81	4,703.56	7,621.26	61,390.69
Bank and cash balance.....	733.66	2,047.78	1,808.81	126.33	1,860.95
Securities and investments.....	31,440.00	22,000.00			
Accounts receivable.....	20,686.50	23,757.75	77.33	1,081.71	5,286.47
Inventories.....	14,729.57	14,956.21			180.00
Sinking fund on local debentures.					
Equity in Hydro systems.....	33,460.08	61,218.73	155.50	382.77	
Other assets.....					
Total assets.....	653,652.17	716,379.28	6,745.20	9,212.07	68,718.11
Deficit.....					
Total.....	653,652.17	716,379.28	6,745.20	9,212.07	68,718.11
LIABILITIES					
Debenture balance.....	193,733.03	184,081.14	3,647.08	3,571.01	33,723.05
Accounts payable.....	45,144.18	81,317.17	290.60	1,123.34	6,936.43
Bank overdraft.....	14,504.35	22,834.27			
Other liabilities.....					5,742.30
Total liabilities.....	253,381.56	288,232.58	3,937.68	4,694.35	46,401.78
RESERVES					
For depreciation.....	117,678.28	121,223.00	1,066.68	1,226.68	7,515.00
For equity in H.E.P.C. system...	33,460.08	61,218.73	155.50	382.77	
Total reserves.....	151,138.36	182,441.73	1,222.18	1,609.45	7,515.00
SURPLUS					
Debentures paid.....	106,416.97	116,068.86	352.92	428.99	9,466.84
Local sinking fund.....					
Additional operating surplus.....	142,715.28	129,636.11	1,232.42	2,479.28	5,334.49
Total surplus.....	249,132.25	245,704.97	1,585.34	2,908.27	14,801.33
Total liabilities, reserves & surplus	653,652.17	716,379.28	6,745.20	9,212.07	68,718.11
Per cent of net debt to total assets.	38.7	44.0	58.4	53.2	67.5

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

Listowel	London 59,784		London Township		Louth Township	
1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,283.96	293,682.97	306,050.90				
	315,050.85	367,004.39				
26,476.01	496,394.63	603,074.05	2,934.70	3,126.76	1,482.84	1,824.15
	11,033.39	37,643.05				
12,249.58	85,915.04	102,994.87	1,114.40	1,114.40	2,029.62	2,210.81
10,595.20	203,142.41	217,176.20	1,066.80	1,066.80	624.92	625.52
1,238.10	31,895.40	33,780.32				
5,772.22	11,767.36	11,794.66				
1,372.71	74,340.76	72,489.85	451.74	451.74		Cr. 126.84
4,750.70			1,733.80	1,733.80		
63,738.48	1,523,192.81	1,752,008.29	7,301.44	7,493.50	4,137.38	4,533.64
70.78	9,441.64	9,058.93	212.06		94.02	6.30
2,736.79	272,019.01	224,598.74		679.59	593.54	485.98
	77,250.14	73,704.93				
	121,509.04	226,674.90				
2,084.71	67,774.33	122,706.99			221.05	279.77
		186,093.75				
68,630.76	2,071,186.97	2,594,846.53	7,513.50	8,173.09	5,045.99	5,305.69
					370.09	433.57
68,630.76	2,071,186.97	2,594,846.53	7,513.50	8,173.09	5,416.08	5,739.26
31,654.64	930,799.79	1,045,575.19	7,080.00	6,850.93	1,851.55	1,797.10
2,252.22	154,870.95	291,262.76	13.50	673.09	2,996.93	3,171.29
		99,357.95				
5,742.30	2,235.86	20,095.85				
39,649.16	1,087,906.60	1,456,291.79	7,093.50	7,524.02	4,848.48	4,968.39
8,312.16	330,108.46	351,420.22			248.10	338.20
2,084.71	67,774.33	122,706.99			221.05	279.77
10,396.87	397,882.79	474,127.21			469.15	617.97
11,535.25	66,100.21	76,324.81	420.00	649.07	98.45	152.90
	121,509.04	226,674.90				
7,049.48	397,788.33	361,427.82				
18,584.73	585,397.58	664,427.53	420.00	649.07	98.45	152.90
68,630.76	2,071,186.97	2,594,846.53	7,513.50	8,173.09	5,416.08	5,739.26
59.6	52.5	59.0	94.6	92.0	96.2	98.9

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA SYSTEM—Continued

Municipality Population	Lucan 624		Lynden Police Village		Markham 970
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....			241.18	241.18	
Substation equipment.....					
Distribution system, overhead....	7,277.13	7,417.27	2,720.56	2,741.16	8,205.04
Distribution system, underground					
Line transformers.....	2,907.90	2,956.12	942.37	1,094.69	3,398.26
Meters.....	2,558.89	2,406.75	744.62	864.84	2,705.75
Street light equipment, regular....	372.54	372.54	163.30	163.30	335.51
Street light equip., ornamental....					
Misc. construction expense.....	394.47	394.47	193.57	193.57	1,016.01
Steam or hydraulic plant.....					
Old plant.....	2,860.45	2,860.45			61.03
Total plant.....	16,371.38	16,407.60	5,005.60	5,298.74	15,721.60
Bank and cash balance.....	1,959.99	1,267.24		467.10	
Securities and investments.....	3,000.00	7,000.00			
Accounts receivable.....	2,014.16	323.52	448.42	396.82	1,759.30
Inventories.....	111.51	43.97			
Sinking fund on local debentures....					
Equity in Hydro systems.....	442.18	1,427.11	448.97	1,191.51	
Other assets.....					
Total assets.....	23,899.22	26,469.44	5,902.99	7,354.17	17,480.90
Deficit.....			225.46		
Total.....	23,899.22	26,469.44	6,128.45	7,354.17	17,480.90
LIABILITIES					
Debenture balance.....	9,135.01	8,761.29	4,067.49	3,981.91	10,520.84
Accounts payable.....					674.39
Bank overdraft.....			66.48		751.21
Other liabilities.....					
Total liabilities.....	9,135.01	8,761.29	4,133.97	3,981.91	11,946.44
RESERVES					
For depreciation.....	2,752.63	3,105.53	1,118.00	1,259.00	755.00
For equity in H.E.P.C. system....	442.18	1,427.11	448.97	1,191.51	
Total reserves.....	3,194.81	4,532.64	1,566.97	2,450.51	755.00
SURPLUS					
Debentures paid.....	2,078.61	2,452.33	427.51	513.09	1,037.99
Local sinking fund.....					
Additional operating surplus.....	9,490.79	10,723.18		408.66	3,741.47
Total surplus.....	11,569.40	13,175.51	427.51	921.75	4,779.46
Total liabilities, reserves & surplus	23,899.22	26,469.44	6,128.45	7,354.17	17,480.90
Per cent of net debt to total assets.	38.2	35.0	70.2	64.7	68.4

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

Markham	Merlin P.V.	Merritton		Milton		Milverton	
		2,589		1,900		1,054	
1922	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	.....	350.00	350.00	.....	.....	237.20	237.20
.....	.....	3,000.00	3,000.00	5,550.19	5,550.19	.....	.....
8,770.58	3,424.43	10,814.64	12,146.45	12,155.85	12,668.74	7,251.71	7,666.31
.....
3,398.26	2,117.13	2,629.94	2,845.82	5,737.93	7,248.23	5,080.18	5,080.18
2,949.65	1,293.80	5,876.02	6,269.57	5,242.12	6,240.48	2,553.05	2,895.36
335.51	373.49	1,407.25	1,407.25	986.67	986.67	562.24	562.24
.....
1,016.01	351.93	2,457.51	2,250.26	2,526.23	2,526.23	557.93	557.93
.....
11.03	275.00	.....	.....	4,065.85	4,065.85	.....	.....
.....
16,481.04	7,835.78	26,535.36	28,269.35	36,264.84	39,286.39	16,242.31	16,999.22
.....
.....	.....	1,653.72	1,061.86	4,439.80	2,382.30	.....	.....
.....	.....	.....	.....	2,000.00	5,000.00	.....	.....
2,316.18	2,239.97	503.58	2,200.00	8,685.46	1,471.98	5,272.51	3,436.74
.....	.....	130.75	44.41	1,239.30	5,382.69	.....	.....
.....
145.76	.....	.....	64.91	1,971.45	6,579.74	.....	1,369.57
.....
.....
18,942.98	10,075.75	28,823.41	31,640.53	54,600.85	60,103.10	21,514.82	21,805.53
.....
18,942.98	10,075.75	28,823.41	31,640.53	54,600.85	60,103.10	21,514.82	21,805.53
.....
.....
9,888.45	8,505.00	4,643.10	4,072.84	13,308.68	12,370.36	7,622.97	7,247.23
.....	1,570.75	317.70	1,224.22	776.73	3,814.79	1,482.20	128.62
29.06	.....	.....	.....	.....	.....	908.66	409.83
.....
.....
9,917.51	10,075.75	4,960.80	5,297.06	14,085.41	16,185.15	10,013.83	7,785.68
.....
.....
1,085.00	.....	948.00	1,497.00	9,725.04	9,951.24	2,307.00	2,639.24
145.76	.....	.....	64.91	1,971.45	6,579.74	.....	1,369.57
.....
1,230.76	.....	948.00	1,561.91	11,696.49	16,530.98	2,307.00	4,008.81
.....
.....
1,670.38	.....	543.11	1,113.37	11,404.30	12,342.62	1,877.03	2,252.77
.....
6,124.33	.....	22,371.50	23,668.19	17,414.65	15,044.35	7,316.96	7,758.27
.....
7,794.71	.....	22,914.61	24,781.50	28,818.95	27,386.97	9,193.99	10,011.04
.....
18,942.98	10,075.75	28,823.41	31,640.53	54,600.85	60,103.10	21,514.82	21,805.53
.....
.....
52.7	100.0	17.2	16.7	25.6	30.2	46.6	38.0

STATEMENT

Comparative Balance Sheets of Electrical Departments

**NIAGARA
SYSTEM—Continued**

Municipality	Mimico		Mitchell		Moorefield
Population	4,187		1,699		
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....	98.30	9,796.63	7,922.78	9,191.17	
Substation equipment.....	50.18	50.18	10,441.48	10,945.65	
Distribution system, overhead....	31,795.20	36,718.39	13,341.40	15,830.70	2,601.73
Distribution system, underground.....					
Line transformers.....	9,844.66	11,766.63	5,651.14	6,385.43	857.72
Meters.....	11,900.69	13,977.89	6,543.48	7,193.86	577.00
Street light equipment, regular....	2,641.23	2,760.56	1,598.23	1,964.33	295.88
Street light equip., ornamental....			12.00		
Misc. construction expense.....	2,112.56	2,431.51		156.10	348.35
Steam or hydraulic plant.....					
Old plant.....			1,500.00	1,500.00	
Total plant.....	58,442.82	77,501.79	47,010.51	53,167.24	4,680.68
Bank and cash balance.....	599.13	1,606.30	3,016.99	2,470.04	326.47
Securities and investments.....			2,000.00	2,000.00	
Accounts receivable.....	402.75	1,451.40	2,060.92	651.44	204.56
Inventories.....	236.43	307.90	431.86	1,156.35	110.00
Sinking fund on local debentures.....					
Equity in Hydro systems.....	1,320.11	3,153.40	2,825.46	4,068.94	
Other assets.....					
Total assets.....	61,001.24	84,020.79	57,345.74	63,514.01	5,321.71
Deficit.....					
Total.....	61,001.24	84,020.79	57,345.74	63,514.01	5,321.71
LIABILITIES					
Debenture balance.....	20,684.34	39,740.51	7,183.45	6,191.39	3,952.35
Accounts payable.....	6,055.95	7,302.96		736.76	
Bank overdraft.....					
Other liabilities.....					
Total liabilities.....	26,740.29	47,043.47	7,183.45	6,928.15	3,952.35
RESERVES					
For depreciation.....	12,159.30	13,949.30	12,953.00	13,862.50	536.00
For equity in H.E.P.C. system....	1,320.11	3,153.40	2,825.46	4,068.94	
Total reserves.....	13,479.41	17,102.70	15,778.46	17,931.44	536.00
SURPLUS					
Debentures paid.....	5,315.66	6,259.49	15,111.77	16,103.83	547.65
Local sinking fund.....					
Additional operating surplus.....	15,465.88	13,615.13	19,272.06	22,550.59	285.71
Total surplus.....	20,781.54	19,874.62	34,383.83	38,654.42	833.36
Total liabilities, reserves & surplus.....	61,001.24	84,020.79	57,345.74	63,514.01	5,321.71
Per cent of net debt to total assets.	43.8	58.2	12.5	11.6	74.3

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

Police Village	Mount Brydges Police Vil.		Newbury		New Hamburg	
			301		1,401	
1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	.....	.....	.....	.....	2,317.59	2,317.59
.....	.....	.....	.....	.....	1,083.10	1,083.10
2,637.54	2,757.54	2,927.02	5,408.07	5,800.41	11,253.95	12,690.05
.....
857.72	641.25	641.25	1,049.04	1,036.62	4,084.29	4,423.10
595.86	1,125.89	1,270.88	661.52	696.90	4,527.65	4,896.44
295.88	120.09	120.09	765.45	765.45	1,149.43	1,303.76
.....
348.35	143.82	143.82	485.13	485.13	1,001.70	1,001.70
.....
.....	.....	.....	754.39	348.22	5,242.56	5,242.56
.....
4,735.35	4,788.59	5,103.06	9,123.60	9,132.73	30,660.27	32,958.30
.....
959.15	1,468.92	2,457.03	359.08	207.03	488.91	889.04
.....
110.00	1,064.00	706.35	559.29	1,057.72	24.17	4,143.56
.....	125.01	34.41	.....	.....	6,881.82	1,151.43
.....
83.35	214.72	527.88	.....	37.16	3,004.42	4,369.74
.....	.....	.....	34.48	.....	.....	.....
.....
5,887.85	7,661.24	8,828.73	10,076.45	10,434.64	41,059.59	43,512.07
.....
5,887.85	7,661.24	8,828.73	10,076.45	10,434.64	41,059.59	43,512.07
.....
3,795.21	3,738.30	3,653.53	9,440.04	8,700.00	14,151.04	13,687.67
232.49	67.84	.....	125.72	398.84	396.67	38.62
.....
.....
4,027.70	3,806.14	3,653.53	9,565.76	9,098.84	14,547.71	13,726.29
.....
644.00	1,158.00	1,300.00	.....	166.00	9,558.00	9,940.00
83.35	214.72	527.88	.....	37.16	3,004.42	4,369.74
.....
727.35	1,372.72	1,827.88	.....	203.16	12,562.42	14,309.74
.....
704.79	481.70	566.47	314.35	1,054.39	3,578.04	4,041.41
.....
428.01	2,000.68	2,780.85	196.34	78.25	10,371.42	11,434.63
.....
1,132.80	2,482.38	3,347.32	510.69	1,132.64	13,949.46	15,476.04
.....
5,887.85	7,661.24	8,828.73	10,076.45	10,434.64	41,059.59	43,512.07
.....
69.5	49.6	44.0	95.6	87.5	35.5	35.1

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA SYSTEM—Continued

Municipality	New Toronto		Niagara Falls		Niagara-
Population	2,947		15,895		1,714
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....		395.00	25,511.64	88,391.10	200.00
Substation equipment.....			40,661.76	85,004.80	1,148.47
Distribution system, overhead....	36,313.38	39,368.97	95,042.52	112,914.63	9,168.82
Distribution system, underground					
Line transformers.....	9,459.84	10,600.95	77,364.01	80,138.67	3,164.31
Meters.....	9,948.09	11,268.78	65,853.96	72,770.87	3,160.30
Street light equipment, regular....	2,567.53	3,259.44	15,637.21	15,720.49	640.66
Street light equip., ornamental....			17,346.71	29,807.06	
Misc. construction expense.....	2,320.33	2,320.33	7,946.26	5,869.74	952.26
Steam or hydraulic plant.....					
Old plant.....					
Total plant.....	60,609.17	67,213.47	345,364.07	490,617.36	18,434.82
Bank and cash balance.....	25,327.64	12,301.12	2,924.97	26,054.23	597.06
Securities and investments.....					
Accounts receivable.....	3,689.67	6,903.94	15,392.76	29,685.04	2,159.48
Inventories.....	956.20	935.91			17.77
Sinking fund on local debentures.					
Equity in Hydro systems.....	5,160.30	17,467.82	263.23	10,879.40	
Other assets.....				4,295.02	
Total assets.....	95,742.98	104,822.26	363,945.03	561,531.05	21,209.13
Deficit.....					
Total.....	95,742.98	104,822.26	363,945.03	561,531.05	21,209.13
LIABILITIES					
Debenture balance.....	6,850.15	6,672.25	116,513.51	326,751.25	8,821.96
Accounts payable.....	8,304.76	7,051.94	7,064.72	19,244.75	836.27
Bank overdraft.....		4,192.12	52,376.85		
Other liabilities.....	82.50	384.30		4,295.02	
Total liabilities.....	15,237.41	18,300.61	175,955.08	350,291.02	9,658.23
RESERVES					
For depreciation.....	9,241.00	10,562.24	41,253.65	40,840.99	1,128.00
For equity in H.E.P.C. system....	5,160.30	17,467.82	263.23	10,879.40	
Total reserves.....	14,401.30	28,030.06	41,516.88	51,720.39	1,128.00
SURPLUS					
Debentures paid.....	1,149.85	1,327.75	88,729.49	103,491.75	2,014.69
Local sinking fund.....					
Additional operating surplus.....	64,954.42	57,163.84	57,743.58	56,027.89	8,408.21
Total surplus.....	66,104.27	58,491.59	146,473.07	159,519.64	10,422.90
Total liabilities, reserves & surplus	95,742.98	104,822.26	363,945.03	561,531.05	21,209.13
Per cent of net debt to total assets.	15.9	21.0	48.4	63.6	45.6

"A"—Continued

of Hydro Municipalities as at December 31, 1922

on-the-Lake	Norwich 1,307		North Norwich Twp.		South Norwich Twp.	
1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
200.00	922.30	922.30				
1,148.47						
11,689.77	7,643.02	7,962.63	1,111.96	1,111.96	1,989.03	1,989.03
3,164.31	2,811.32	3,235.29	3,627.17	3,627.17	2,411.09	2,411.09
3,479.18	4,723.16	4,982.85	1,018.34	1,018.34	479.00	479.00
698.30	824.16	882.90				
	1,956.25	2,754.54				
1,157.26	1,599.84	1,412.34	234.23	234.23	339.84	339.84
	3,509.82	3,509.82				
21,537.29	23,989.87	25,662.67	5,991.70	5,991.70	5,218.96	5,218.96
1,745.67	1,233.85	3,247.33	88.36	34.30		
	3,000.00	6,000.00				
187.53	8,669.75	4,380.82				
	832.17	480.53				
475.47	2,286.19	3,731.82				
	54.06					
23,945.96	40,065.89	43,503.17	6,080.06	6,026.00	5,218.96	5,218.96
23,945.96	40,065.89	43,503.17	6,080.06	6,026.00	5,218.96	5,218.96
7,738.45	11,286.20	10,955.66	5,321.66	5,192.51	4,542.85	4,347.70
434.65	960.25	1,189.02	54.06			
8,173.10	12,246.45	12,144.68	5,375.72	5,192.51	4,542.85	4,347.70
1,326.28	11,160.56	11,187.85				
475.47	2,286.19	3,731.82				
1,801.75	13,446.75	14,919.67				
3,098.20	2,469.80	2,800.34	704.34	833.49	676.11	871.26
10,872.91	11,902.89	13,638.48				
13,971.11	14,372.69	16,438.82	704.34	833.49	676.11	871.26
23,945.96	40,065.89	43,503.17	6,080.06	6,026.00	5,218.96	5,218.96
34.8	30.5	30.6	88.5	86.1	86.0	83.3

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA
SYSTEM—Continued

Municipality	Oil Springs		Otterville Police Vil.		Palmerston
Population	491				1,780
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....	42.00	1,042.00			
Substation equipment.....					691.88
Distribution system, overhead....	10,464.71	10,783.50	3,523.26	3,623.30	13,346.71
Distribution system, underground					
Line transformers.....	4,727.83	5,044.17	1,659.55	1,774.43	3,514.53
Meters.....	2,418.54	2,660.47	1,121.93	1,147.31	4,191.64
Street light equipment, regular..	276.29	305.72	244.94	341.80	746.32
Street light equip., ornamental..					
Misc. construction expense.....	1,783.58	1,718.58	142.00	142.00	1,638.06
Steam or hydraulic plant.....					
Old plant.....					4,018.71
Total plant.....	19,712.95	21,554.44	6,691.68	7,028.84	28,147.85
Bank and cash balance.....	1,476.38	1,467.47	421.39	1,258.18	1,362.12
Securities and investments.....			2,000.00	2,000.00	
Accounts receivable.....	235.13	1,918.36	177.04	42.03	6,093.29
Inventories.....	2,643.61	1,432.09	30.75	74.32	4,322.09
Sinking fund on local debentures.					
Equity in Hydro systems.....		430.65		165.44	
Other assets.....					
Total assets.....	24,068.07	26,803.01	9,320.86	10,568.81	39,925.35
Deficit.....					
Total.....	24,068.07	26,803.01	9,320.86	10,568.81	39,925.35
LIABILITIES					
Debenture balance.....	15,188.85	14,607.58	3,646.71	3,473.18	9,302.09
Accounts payable.....	4,199.31	2,755.64		50.47	3,597.45
Bank overdraft.....					
Other liabilities.....					
Total liabilities.....	19,388.16	17,363.22	3,646.71	3,523.65	12,899.54
RESERVES					
For depreciation.....	1,409.00	1,809.00	1,140.00	1,272.60	4,826.00
For equity in H.E.P.C. system....		430.65		165.44	
Total reserves.....	1,409.00	2,239.65	1,140.00	1,438.04	4,826.00
SURPLUS					
Debentures paid.....	1,532.46	2,113.73	853.29	1,026.82	12,697.91
Local sinking fund.....					
Additional operating surplus.....	1,738.45	5,086.41	3,680.86	4,580.30	9,501.90
Total surplus.....	3,270.91	7,200.14	4,534.15	5,607.12	22,199.81
Total liabilities, reserves & surplus	24,068.07	26,803.01	9,320.86	10,568.81	39,925.35
Per cent of net debt to total assets.	80.8	65.9	39.2	33.6	32.4

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

Palmerston	Paris		Parkhill		Petrolia	
	4,400		1,201		2,911	
1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
691.88	7,626.26	7,626.26			900.00	900.00
16,085.95	10,959.86	11,174.51			2,403.55	2,403.55
	42,231.09	44,332.34	12,438.35	12,738.42	26,419.82	26,929.54
4,062.85	13,583.15	14,001.74	2,092.56	2,092.56	17,125.22	19,073.93
4,373.95	12,541.16	13,512.94	2,467.13	2,676.80	9,420.19	10,484.88
825.60	2,400.94	2,571.62	823.68	823.68	985.28	985.28
	6,647.54	9,371.33			3,864.07	3,864.07
1,880.19	350.20	350.20	1,251.77	1,251.77	4,885.19	4,718.19
4,018.71	16,684.76	16,684.76			3,389.94	3,389.94
31,939.13	113,033.96	119,625.70	19,073.49	19,583.23	69,393.26	72,749.38
1,935.55	32.35			1,729.02		
	3,000.00					4,000.00
8,278.75			2,663.89	607.75	3,614.24	1,137.82
3,614.44	26.57	909.68			8,148.61	10,656.32
	21,004.82	24,084.72				
1,177.28	1,037.82	3,993.53		131.74		3,153.11
46,945.15	138,135.52	148,613.63	21,737.38	22,051.74	81,156.11	91,696.63
46,945.15	138,135.52	148,613.63	21,737.38	22,051.74	81,156.11	91,696.63
13,049.37	45,171.54	42,952.71	10,961.27	13,356.07	44,373.07	43,161.13
799.26	907.46	628.60	3,860.51			
		1,790.05			2,361.25	5,053.31
			1,850.00			
13,848.63	46,079.00	45,371.36	16,671.78	13,356.07	46,734.32	48,214.44
4,919.12	23,804.00	26,629.00	670.00	1,058.00	10,274.28	11,168.58
1,177.28	1,037.82	3,993.53		131.74		3,153.11
6,096.40	24,841.82	30,622.53	670.00	1,189.74	10,274.28	14,321.69
13,950.63	31,828.46	34,047.29	712.45	1,099.21	5,626.93	6,838.87
	21,004.82	24,084.72				
13,049.49	14,381.42	14,487.73	3,683.15	6,406.72	18,520.58	22,321.63
27,000.12	67,214.70	72,619.74	4,395.60	7,505.93	24,147.51	29,160.50
46,945.15	138,135.52	148,613.63	21,737.38	22,051.74	81,156.11	91,696.63
30.2	33.4	31.4	77.0	61.0	57.5	54.5

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA SYSTEM—Continued

Municipality Population	Plattsville Police Vil.		Point Edward 1,150		Port Colborne 3,123
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....					
Substation equipment.....					
Distribution system, overhead...	2,949.66	2,954.69	7,856.34	8,253.82	31,856.07
Distribution system, underground					
Line transformers.....	906.14	906.14	3,584.50	4,129.00	6,644.54
Meters.....	1,252.80	1,271.10	2,312.59	2,502.84	8,087.18
Street light equipment, regular...	133.65	133.65	467.55	480.25	723.92
Street light equip., ornamental...					
Misc. construction expense.....	535.92	535.92	366.39	366.39	4,457.13
Steam or hydraulic plant.....					
Old plant.....					9,929.60
Total plant.....	5,778.17	5,801.50	14,587.37	15,732.30	61,698.44
Bank and cash balance.....		69.02			170.00
Securities and investments.....					
Accounts receivable.....	271.36	271.36			745.69
Inventories.....					3,215.81
Sinking fund on local debentures.					
Equity in Hydro systems.....	977.92	1,544.68			
Other assets.....					
Total assets.....	7,027.45	7,686.56	14,587.37	15,732.30	65,829.94
Deficit.....	1,525.75	2,127.27			
Total.....	8,553.20	9,813.83	14,587.37	15,732.30	65,829.94
LIABILITIES					
Debenture balance.....	4,595.22	4,484.30	5,672.73	5,402.82	49,642.56
Accounts payable.....	873.11	1,452.07	4,201.81	5,058.78	
Bank overdraft.....	46.19				7,387.70
Other liabilities.....					155.00
Total liabilities.....	5,514.42	5,936.37	9,874.54	10,461.60	57,185.26
RESERVES					
For depreciation.....	1,419.08	1,580.08	2,438.00	2,851.00	1,892.00
For equity in H.E.P.C. system...	977.92	1,544.68			
Total reserves.....	2,397.00	3,124.76	2,438.00	2,851.00	1,892.00
SURPLUS					
Debentures paid.....	641.78	752.70	1,327.27	1,597.18	2,357.44
Local sinking fund.....					
Additional operating surplus.....			947.56	822.52	4,395.24
Total surplus.....	641.78	752.70	2,274.83	2,419.70	6,752.68
Total liabilities, reserves & surplus	8,553.20	9,813.83	14,587.37	15,732.30	65,829.94
Per cent of net debt to total assets.	78.4	96.6	67.7	66.4	87.0

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

Port Colborne	Port Credit		Port Dalhousie		Port Dover	
	1,119		1,424		1,380	
	1922	1921	1922	1921	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	675.00	675.00	.....	.....	.....	.....
35,963.76	10,203.96	11,541.85	4,501.10	8,268.40	17,685.88	18,735.76
8,816.63	1,787.03	1,898.47	3,957.52	4,293.82	3,931.05	4,414.72
9,310.87	3,147.35	3,721.27	4,311.43	4,616.94	955.86	1,775.31
1,234.33	544.72	544.72	509.05	515.10	1,431.76	1,449.22
5,278.29	626.31	626.31	1,491.16	1,574.96	930.93	2,180.10
9,929.60	.....	.....	6,018.38	6,018.38	.....	.....
70,533.48	16,984.37	19,007.62	20,788.64	25,287.60	24,935.48	28,555.11
201.99	1,567.49	1,479.01	1,422.55	1,743.19	92.01	.....
.....	3,800.00	3,800.00	.....	.....	.....	.....
2,047.84	.....	.....	212.78	1,378.05	39.93	.....
5,233.13	.....	.....	.....	167.98	.....	.....
446.65	455.91	1,006.71	834.33	972.72	.....	59.62
.....
78,463.09	22,807.77	25,293.34	23,258.30	29,549.54	25,067.42	28,614.73
.....	.....	.....	542.20	.....	.....	.....
78,463.09	22,807.77	25,293.34	23,800.50	29,549.54	25,067.42	28,614.73
48,039.52	6,676.13	5,896.04	14,928.67	19,422.08	21,000.00	19,824.01
16,408.92	405.69	1,192.99	1,497.37	1,284.67	3,485.72	6,121.61
1,264.58	.....	.....	.....	.....	.....	301.89
176.64	.....	.....	.....	.....	581.70	.....
65,889.66	7,081.82	7,089.03	16,426.04	20,706.75	25,067.42	26,247.51
2,985.00	5,069.94	5,129.54	3,968.80	2,944.34	.....	527.00
446.65	455.91	1,006.71	834.33	972.72	.....	59.62
3,431.65	5,525.85	6,136.25	4,803.13	3,917.06	.....	586.62
3,960.48	1,823.87	2,603.96	2,571.33	3,077.92	.....	1,175.99
.....	.....	.....	.....	167.98	.....	.....
5,181.30	8,376.23	9,464.10	.....	1,679.83	.....	604.61
9,141.78	10,200.10	12,068.06	2,571.33	4,925.73	.....	1,780.60
78,463.09	22,807.77	25,293.34	23,800.50	29,549.54	25,067.42	28,614.73
84.4	31.1	29.2	70.5	72.4	100.0	88.5

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA
SYSTEM—Continued

Municipality	Port Stanley		Preston		Princeton
Population	717		5,547		
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....	1,505.38	1,505.38			
Substation equipment.....			14,018.83	32,400.58	
Distribution system, overhead....	14,532.87	15,131.34	51,748.76	54,677.50	2,002.42
Distribution system, underground					
Line transformers.....	4,932.28	5,609.30	23,515.69	31,917.23	296.86
Meters.....	2,889.21	3,013.80	18,770.93	24,118.34	552.14
Street light equipment, regular...	766.67	903.93	3,476.90	3,558.17	116.30
Street light equip., ornamental....			3,874.86	3,560.33	
Misc. construction expense.....	5,606.55	5,606.55	6,399.23	6,217.23	64.35
Steam or hydraulic plant.....					
Old plant.....	577.51	577.51	23,549.22	23,549.22	
Total plant.....	30,817.47	32,347.81	145,354.42	179,998.60	3,032.07
Bank and cash balance.....	745.95	2,769.81	1,689.01	50.00	476.43
Securities and investments.....					
Accounts receivable.....	2,115.47	890.86	1,380.58	3,350.53	521.77
Inventories.....	276.03	181.55			38.64
Sinking fund on local debentures.					
Equity in Hydro systems.....	2,718.56	4,096.40	8,735.89	15,501.92	372.15
Other assets.....					
Total assets.....	36,666.48	40,286.43	157,159.90	198,901.05	4,441.06
Deficit.....					1,316.64
Total.....	36,666.48	40,286.43	157,159.90	198,901.05	5,757.70
LIABILITIES					
Debenture balance.....	15,049.59	14,569.34	56,651.70	55,922.29	3,114.93
Accounts payable.....	474.17	8.90	4,021.00	4,585.96	1,033.55
Bank overdraft.....				31,801.37	
Other liabilities.....		5.00			
Total liabilities.....	15,523.76	14,583.24	60,672.70	92,309.62	4,148.48
RESERVES					
For depreciation.....	7,265.25	8,063.25	35,125.96	37,133.14	802.00
For equity in H.E.P.C. system....	2,718.56	4,096.40	8,735.89	15,501.92	372.15
Total reserves.....	9,983.81	12,159.65	43,861.85	52,635.06	1,174.15
SURPLUS					
Debentures paid.....	3,900.41	4,380.66	32,213.81	36,818.08	435.07
Local sinking fund.....					
Additional operating surplus.....	7,258.50	9,162.88	20,411.54	17,138.29	
Total surplus.....	11,158.91	13,543.54	52,625.35	53,956.37	435.07
Total liabilities, reserves & surplus	36,666.48	40,286.43	157,159.90	198,901.05	5,757.70
Per cent of net debt to total assets.	42.3	40.3	38.7	50.3	93.5

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

Police Vil.	Queenston Police Vil.		Ridgetown 2,267		Riverside 3,000	Rockwood Police Vil.	
1922	1921	1922	1921	1922	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
			889.25	889.26		79 00	79 00
2,620.27	6,006.62	6,035.76	11,338.25	11,736.22	25,222.02	5,536.74	5,684.57
296.86	811.89	1,027.48	4,383.72	4,591.75	7,360.86	1,211.93	1,211.93
610.14	772.48	909.31	5,043.74	5,495.72	5,386.92	1,521.21	1,619.75
116.30	395.59	395.59	896.88	896.88		316.46	410.51
			1,319.10	1,319.10			
64.35	1,948.71	1,948.71	363.25	513.25	237.00	308.05	308.05
			5,128.46	5,128.46			
3,707.92	9,935.29	10,316.85	29,362.66	30,570.64	38,206.80	8,973.39	9,313.81
740.19	615.51	542.74	3,453.31	8,392.15		68.62	148.83
			8,500.00	8,500.00			
38.64	50.75	9.49	1,472.71	793.38	1,450.28	311.59	311.59
	12.83		4,155.57	3,290.37		177.80	264.71
580.01		58.92	730.62	2,014.61		627.27	1,026.07
5,066.76	10,614.38	10,928.00	47,674.87	53,561.15	39,657.08	10,158.67	11,065.01
992.31							
6,059.07	10,614.38	10,928.00	47,674.87	53,561.15	39,657.08	10,158.67	11,065.01
3,039.75	8,000.00	7,782.52	14,697.74	13,754.34	29,500.00		
1,070.78	2,039.75	2,127.32			7,702.45	1,585.67	678.83
			1,319.00	1,319.10			
4,110.53	10,039.75	9,909.84	16,016.74	15,073.44	37,202.45	1,585.67	678.83
858.28		167.00	4,864.00	5,518.00	1,171.69	2,513.00	2,772.90
580.01		58.92	730.62	2,014.61		627.27	1,026.07
1,438.29		225.92	5,594.62	7,532.61	1,171.69	3,140.27	3,798.97
510.25		217.48	4,758.35	5,701.65		2,000.00	2,000.00
	574.63	574.76	21,305.16	25,253.45	1,282.94	3,432.73	4,587.21
510.25	574.63	792.24	26,063.51	30,955.10	1,282.94	5,432.73	6,587.21
6,059.07	10,614.38	10,928.00	47,674.87	53,561.15	39,657.08	10,158.67	11,065.01
91.6	94.5	91.1	33.6	29.2	94.0	15.5	6.8

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA
SYSTEM—Continued

Municipality Population	Rodney 756		St. Catharines 20,961		St. Clair Beach 82
	1921	1922	1921	1922	1922
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....			38,247.02	36,786.77	
Substation equipment.....			69,419.56	68,425.61	
Distribution system, overhead....	6,034.78	6,311.57	143,546.52	147,827.08	4,708.54
Distribution system, underground.....					
Line transformers.....	1,421.85	1,494.68	49,386.41	55,632.49	833.69
Meters.....	2,039.48	2,379.36	46,545.48	50,279.53	450.43
Street light equipment, regular....	528.94	569.24	10,724.25	13,493.18	
Street light equip., ornamental....			11,227.12	24,521.46	
Misc. construction expense.....	679.09	695.00	36,516.91	38,192.45	
Steam or hydraulic plant.....					
Old plant.....	700.00	700.00			
Total plant.....	11,404.14	12,149.85	405,613.27	435,158.57	5,992.66
Bank and cash balance.....	318.79	614.79	1,910.13	1,316.41	
Securities and investments.....		2,000.00			
Accounts receivable.....	2,842.10	1,370.79	13,684.84	19,413.78	3,854.42
Inventories.....			1,546.09	835.05	
Sinking fund on local debentures.....			21,785.16	25,172.14	
Equity in Hydro systems.....		176.52	1,329.92	2,748.88	
Other assets.....					
Total assets.....	14,565.03	16,311.95	445,869.41	484,644.83	9,847.08
Deficit.....					2.04
Total.....	14,565.03	16,311.95	445,869.41	484,644.83	9,849.12
LIABILITIES					
Debenture balance.....	7,845.12	7,691.76	214,872.39	210,741.94	6,341.45
Accounts payable.....			20,793.27	36,840.77	3,507.67
Bank overdraft.....					
Other liabilities.....			10,407.20	24,521.46	
Total liabilities.....	7,845.12	7,691.76	246,072.86	272,104.17	9,849.12
RESERVES					
For depreciation.....	1,481.00	1,747.00	59,488.44	65,680.30	
For equity in H.E.P.C. system....		176.52	1,329.92	2,748.88	
Total reserves.....	1,481.00	1,923.52	60,818.36	68,429.18	
SURPLUS					
Debentures paid.....	654.88	808.24	17,150.52	21,280.97	
Local sinking fund.....			21,785.16	25,172.14	
Additional operating surplus.....	4,584.03	5,888.43	100,042.51	97,658.37	
Total surplus.....	5,238.91	6,696.67	138,978.19	144,111.48	
Total liabilities, reserves & surplus.....	14,565.03	16,311.95	445,869.41	484,644.83	9,849.12
Per cent of net debt to total assets.....	53.8	47.2	55.3	56.4	100.0

"A"—Continued

of Hydro Municipalities as at December 31, 1922

St. George Police Vil.		St. Jacobs Police Vil.		St. Marys 4,039		St. Thomas 17,892	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	.....	.....	.....	3,000.00	3,000.00	39,537.40	41,969.65
.....	.....	.....	.....	23,305.78	23,878.71	69,697.91	78,618.25
3,195.53	3,408.70	3,524.40	3,814.82	32,466.25	35,750.80	86,473.97	88,116.01
.....	.....	.....	.....	.....	.....	9,974.22	11,805.54
1,175.69	1,175.69	904.72	1,072.92	11,855.98	13,333.10	27,840.96	33,031.68
1,345.34	1,423.95	1,132.00	1,240.71	14,932.57	15,942.18	45,906.72	48,176.89
218.11	228.77	263.53	276.56	2,217.66	2,457.99	13,122.03	13,138.22
.....	.....	.....	.....	.....	.....	7,538.63	7,538.63
374.18	374.18	452.22	452.22	3,432.60	3,304.86	5,905.10	7,535.17
.....
.....	.....	.....	.....	20,696.85	20,696.85	.....	.....
6,308.85	6,611.29	6,276.87	6,857.23	111,907.69	118,364.49	305,996.94	329,930.04
70.73	1,169.83	1,055.89	737.80	.....	.....	2,697.77	987.12
5,000.00	5,000.00	3,000.00	3,000.00	.....	.....	33,306.81	19,706.81
256.47	633.54	298.73	538.76	2,376.93	6,026.64	23,240.53	30,499.86
405.20	321.80	.....	.....	2,568.37	3,540.43	26,331.80	20,875.50
.....	.....	.....	.....	4,868.51	5,414.11	.....	.....
215.34	665.18	.....	*200.45	7,458.60	11,826.74	20,231.24	31,919.04
.....
12,256.59	14,401.64	10,631.49	11,334.24	129,180.10	145,172.41	411,805.09	433,918.37
.....
12,256.59	14,401.64	10,631.49	11,334.24	129,180.10	145,172.41	411,805.09	433,918.37
.....
5,315.19	5,194.69	5,252.70	5,039.51	44,037.20	41,757.81	91,426.76	86,319.25
71.71	50.43	105.45	134.00	326.42	541.07	22,026.64	28,259.07
.....	.....	.....	.....	1,957.90	9,362.58	.....	.....
.....
5,386.90	5,245.12	5,358.15	5,173.51	46,321.52	51,661.46	111,453.40	114,578.32
.....
1,372.00	1,549.00	944.00	1,104.00	28,293.72	30,209.18	66,955.36	65,222.91
215.34	665.18	.....	200.45	7,458.60	11,826.74	20,231.24	31,919.04
1,587.34	2,214.18	944.00	1,304.45	35,752.32	42,035.92	87,186.60	97,141.95
.....
684.81	805.31	747.30	960.49	35,209.82	37,489.21	51,657.67	56,765.18
.....	.....	.....	.....	4,868.51	5,414.11	.....	.....
4,597.54	6,137.03	3,582.04	3,895.79	7,027.93	8,571.71	161,507.42	165,432.92
5,282.35	6,942.34	4,329.34	4,856.28	47,106.26	51,475.03	213,165.09	222,198.10
12,256.59	14,401.64	10,631.49	11,334.24	129,180.10	145,172.41	411,805.09	433,918.37
.....
43.9	38.2	50.4	46.8	35.8	38.8	27.1	28.5

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA SYSTEM—Continued

Municipality	Sarnia		Scarboro Township		Seaforth
Population	14,905				1,950
	1921	1922	1921	1922	1921
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....	67,232.67	75,247.75			1,251.57
Substation equipment.....	85,016.46	85,100.34			5,995.27
Distribution system, overhead....	118,125.29	124,458.08	24,468.50	53,122.33	22,561.59
Distribution system, underground					
Line transformers.....	58,366.12	66,199.71	7,975.82	11,559.19	6,474.14
Meters.....	45,307.09	50,294.89	12,751.93	16,810.21	6,519.82
Street light equipment, regular...	4,796.01	4,801.81	4,448.02	5,444.33	1,055.71
Street light equip., ornamental...	7,482.11	7,482.11			
Misc. construction expense.....	19,215.34	19,123.87	862.05	862.05	355.98
Steam or hydraulic plant.....					
Old plant.....	56,249.50	56,249.50			
Total plant.....	461,790.59	488,958.06	50,506.32	87,798.11	44,214.08
Bank and cash balance.....	3,650.62	594.21	4,650.82	2,533.69	665.39
Securities and investments.....					11,000.00
Accounts receivable.....	37,890.12	16,404.16	2,770.40	4,098.57	3,591.12
Inventories.....	6,607.88	22,058.57			3,091.75
Sinking fund on local debentures.					5,351.67
Equity in Hydro systems.....		14,142.76	2,046.48	3,173.00	7,971.16
Other assets.....					
Total assets.....	509,939.21	542,157.76	59,974.02	97,603.37	75,885.17
Deficit.....			72.78		
Total.....	509,939.21	542,157.76	60,046.80	97,603.37	75,885.17
LIABILITIES					
Debenture balance.....	268,819.05	258,907.19	39,781.85	38,510.53	25,000.00
Accounts payable.....	19,931.95	15,156.51	7,796.49	23,649.16	
Bank overdraft.....				7,937.41	
Other liabilities.....	14,008.23	9,871.67	1,625.83	4,825.95	
Total liabilities.....	302,759.23	283,935.37	49,204.17	74,923.05	25,000.00
RESERVES					
For depreciation.....	47,791.00	57,040.00	6,078.00	8,153.50	14,746.25
For equity in H.E.P.C. system....		14,142.76	2,046.48	3,173.00	7,971.16
Total reserves.....	47,791.00	71,182.76	8,124.48	11,326.50	22,717.41
SURPLUS					
Debentures paid.....	29,180.95	39,092.81	2,718.15	3,989.47	
Local sinking fund.....					5,351.67
Additional operating surplus.....	130,208.03	147,946.82		7,364.35	22,816.09
Total surplus.....	159,388.98	187,039.63	2,718.15	11,353.82	28,167.76
Total liabilities, reserves & surplus	509,939.21	542,157.76	60,046.80	97,603.37	75,885.17
Per cent of net debt to total assets.	59.4	53.7	82.0	79.4	32.9

“ A ”—Continued
of Hydro Municipalities as at December 31, 1922

Seaforth	Simcoe 3,951		Springfield 432		Stamford Township	
1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,251.57	1,496.75	1,996.22			3,040.54	5,790.86
5,995.27	5,611.99	5,611.99			5,632.21	14,708.86
24,935.14	20,141.33	21,978.89	4,158.22	4,257.52	32,819.69	40,389.47
7,138.18	8,569.68	9,616.45	671.74	671.74	10,855.36	13,888.15
6,848.07	6,201.31	7,350.31	863.76	940.04	8,377.59	10,500.00
1,055.71	1,673.24	1,764.14	269.42	269.42	1,624.87	3,437.79
	2,527.16	2,527.16				
355.98	3,836.57	3,880.65	675.08	675.08	6,166.13	7,374.48
	927.92	927.92			15,127.16	13,743.66
47,579.92	50,985.95	55,653.73	6,638.22	6,813.80	83,643.55	109,833.27
1,696.69			224.78	272.73		1,101.14
9,000.00	11,000.00	6,000.00				
1,191.30	1,489.97	2,039.87		135.83	4,867.31	824.16
5,354.95						4,136.75
6,011.48						
10,395.00	284.71	1,347.03		80.85		1,306.51
81,229.34	63,760.63	65,040.63	6,863.00	7,303.21	88,510.86	117,201.83
81,229.34	63,760.63	65,040.63	6,863.00	7,303.21	88,510.86	117,201.83
25,000.00	35,434.90	34,631.60	2,803.35	2,296.00	45,033.04	72,734.60
2,059.86	1,361.14	685.87	381.92	95.12	22,198.73	18,343.42
	1,899.54	392.42			2,111.05	
	3,500.00	3,500.00			9.00	185.00
27,059.86	42,195.58	39,209.89	3,185.27	2,391.12	69,351.82	91,263.02
14,936.25	7,727.57	9,053.57			7,003.48	8,451.49
10,395.00	284.71	1,347.03		80.85		1,306.51
25,331.25	8,012.28	10,400.60		80.85	7,003.48	9,758.00
		803.30	2,196.65	2,704.00	2,966.96	5,265.40
6,011.48						
22,826.75	13,552.77	14,626.84	1,481.08	2,127.24	9,188.60	10,915.41
28,838.23	13,552.77	15,430.14	3,677.73	4,831.24	12,155.56	16,180.81
81,229.34	63,760.63	65,040.63	6,863.00	7,303.21	88,510.86	117,201.83
38.1	66.2	61.6	46.4	33.1	78.4	78.8

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA SYSTEM—Continued

Municipality Population	Stratford		Strathroy		Tavistock
	17,611		2,627		1,003
	1921	1922	1921	1922	1921
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....	82,729.04	93,356.55	1,070.00	1,070.00	234.02
Substation equipment.....	60,565.85	71,401.13	8,061.36	8,077.21	.....
Distribution system, overhead....	118,078.44	123,423.52	23,711.60	25,812.68	6,406.49
Distribution system, underground	.....	.....	.....	.....	.....
Line transformers.....	36,633.32	48,026.67	11,989.18	12,568.51	1,680.01
Meters.....	54,682.90	63,447.63	9,379.04	10,141.61	2,737.64
Street light equipment, regular...	6,114.96	6,114.96	1,566.10	1,566.10	711.93
Street light equip., ornamental...	11,075.05	11,075.05	.....	.....	.....
Misc. construction expense.....	13,466.05	13,360.08	694.30	694.30	570.89
Steam or hydraulic plant.....	.....	.....	.....	.....	.....
Old plant.....	16,260.00	16,260.00	12,343.15	12,343.15	.....
Total plant.....	399,605.61	446,465.59	68,814.73	72,273.56	12,340.98
Bank and cash balance.....	630.51	5,177.56	137.79	1,099.62	3,387.76
Securities and investments.....	23,000.00	23,000.00	3,000.00	3,000.00	7,050.00
Accounts receivable.....	14,557.56	54,686.53	368.74	368.40	1,118.77
Inventories.....	6,093.55	20,893.52	11,342.02	13,511.16	286.13
Sinking fund on local debentures.	44,661.46	52,659.30	.....	.....	.....
Equity in Hydro systems.....	18,587.51	29,933.06	1,304.68	5,040.49	.....
Other assets.....	.....	.....	.....	.....	.....
Total assets.....	507,136.20	632,815.56	84,967.96	95,293.23	24,183.64
Deficit.....	.....	.....	.....	.....	.....
Total.....	507,136.20	632,815.56	84,967.96	95,293.23	24,183.64
LIABILITIES	.....	.....	.....	.....	.....
Debenture balance.....	222,000.00	362,000.00	36,641.66	34,963.01	5,500.97
Accounts payable.....	21,587.36	1,272.74	.....	.....	.....
Bank overdraft.....	24,000.00	.....	.....	.....	.....
Other liabilities.....	.....	6,000.00	.....	.....	.....
Total liabilities.....	267,587.36	369,272.74	36,641.66	34,963.01	5,500.07
RESERVES	.....	.....	.....	.....	.....
For depreciation.....	81,804.92	87,334.58	11,955.00	13,474.97	2,135.00
For equity in H.E.P.C. system...	18,587.51	29,933.06	1,304.68	5,040.49	.....
Total reserves.....	100,392.43	117,267.64	13,259.68	18,515.46	2,135.00
SURPLUS	.....	.....	.....	.....	.....
Debentures paid.....	43,800.00	43,800.00	9,590.34	11,268.99	499.03
Local sinking fund.....	44,661.46	52,659.30	.....	.....	.....
Additional operating surplus.....	50,694.95	49,815.88	25,476.28	30,545.77	16,048.64
Total surplus.....	139,156.41	146,275.18	35,066.62	41,814.76	16,547.67
Total liabilities, reserves & surplus	507,136.20	632,815.56	84,967.96	95,293.23	24,183.64
Per cent of net debt to total assets.	52.7	61.2	43.2	38.8	22.7

"A"—Continued

of Hydro Municipalities as at December 31, 1922

Tavistock	Tecumseh 1,019	Thamesford Police Village		Thamesville 817		Thedford 583
1922	1922	1921	1922	1921	1922	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
234.02						
7,143.36	17,971.48	4,546.87	4,972.70	5,003.58	5,394.18	7,278.07
1,680.01	3,442.38	2,061.98	2,075.36	2,448.34	2,448.34	1,328.45
3,526.36	3,932.09	1,221.19	1,389.29	2,143.88	2,429.99	1,603.33
711.93		176.85	176.85	325.94	325.94	843.20
570.89	774.50	214.02	214.02	561.75	561.75	1,530.81
				4,232.38	4,232.38	433.78
13,866.57	26,120.45	8,220.91	8,828.22	14,715.87	15,392.58	13,017.64
632.59		1,476.61	1,920.88	1,317.25	4,449.09	3,319.74
8,631.47						
2,417.48	309.12	218.21	1,187.45	984.48	1,320.99	174.58
249.42		26.30	10.05	425.28	425.28	
1,210.83		614.55	1,299.22	369.27	879.09	15.60
				7.77		
27,008.36	26,429.57	10,556.58	13,245.82	17,819.92	22,467.03	16,527.56
	1,094.89					
27,008.36	27,524.46	10,556.58	13,245.82	17,819.92	22,467.03	16,527.56
5,385.71	18,048.73	4,414.80	4,174.62	9,452.92	9,115.03	16,051.45
	8,397.84		320.51			7.29
5,385.71	26,446.57	4,414.80	4,495.13	9,452.92	9,115.03	16,058.74
2,469.00	626.62	2,173.69	2,425.69	2,414.86	2,660.19	
1,210.83		614.55	1,299.22	369.27	879.09	15.60
3,679.83	626.62	2,788.24	3,724.91	2,784.13	3,539.28	15.60
614.29	451.27	943.23	1,183.41	1,734.88	2,072.77	448.55
17,328.53		2,410.31	3,842.37	3,847.99	7,739.95	4.67
17,942.82	451.27	3,353.54	5,025.78	5,582.87	9,812.72	453.22
27,008.36	27,524.46	10,556.58	13,245.82	17,819.92	22,467.03	16,527.56
20.8	100.0	41.7	37.6	53.0	42.3	97.1

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA
SYSTEM—Continued

Municipality Population	Thorndale Police Vil.		Thorold 5,243		Tilbury 1,851
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....					957.46
Substation equipment.....					
Distribution system, overhead....	2,171.10	2,171.10	18,506.43	20,264.56	6,607.56
Distribution system, underground.....					
Line transformers.....	939.20	1,218.03	5,594.34	7,316.98	3,966.51
Meters.....	1,029.02	1,029.02	11,970.39	12,797.07	3,265.80
Street light equipment, regular....	80.36	80.36	1,530.68	1,572.48	237.09
Street light equip., ornamental....					
Misc. construction expense.....	305.63	305.63	3,800.00	3,963.15	1,159.48
Steam or hydraulic plant.....			13,075.00	14,916.41	
Old plant.....					3,053.47
Total plant.....	4,525.31	4,804.14	54,476.84	60,830.65	19,247.37
Bank and cash balance.....	472.74	762.56	384.25		
Securities and investments.....					
Accounts receivable.....			862.39	293.57	
Inventories.....	39.97	29.07	281.10	8.47	
Sinking fund on local debentures.....					
Equity in Hydro systems.....	1,050.81	1,570.99		150.94	513.89
Other assets.....					
Total assets.....	6,088.83	7,166.76	56,004.58	61,283.63	19,761.26
Deficit.....	338.62				267.79
Total.....	6,427.45	7,166.76	56,004.58	61,283.63	20,029.05
LIABILITIES					
Debenture balance.....	2,602.22	2,468.57			12,286.55
Accounts payable.....	1,356.50	1,440.20	2,103.54	1,347.94	2,638.05
Bank overdraft.....				188.81	31.11
Other liabilities.....				835.50	
Total liabilities.....	3,958.72	3,908.77	2,103.54	2,372.25	14,955.71
RESERVES					
For depreciation.....	933.66	1,057.66	16,579.00	17,781.77	2,846.00
For equity in H.E.P.C. system....	1,050.81	1,570.99		150.94	513.89
Total reserves.....	1,984.47	2,628.65	16,579.00	17,932.71	3,359.89
SURPLUS					
Debentures paid.....	484.26	617.91			1,713.45
Local sinking fund.....					
Additional operating surplus.....		11.43	37,322.04	40,978.67	
Total surplus.....	484.26	629.34	37,322.04	40,978.67	1,713.45
Total liabilities, reserves & surplus.....	6,427.45	7,166.76	56,004.58	61,283.63	20,029.05
Per cent of net debt to total assets.....	65.0	69.9	3.7	3.9	76.0

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

Tilbury	Tillsonburg 3,027		Toronto 522,942		Toronto & Niagara Power Co'y.	Toronto Twp.	
1922	1921	1922	1921	1922	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
957.46	2,224.27	2,224.27	1,701,146.65	1,361,987.38			
14,095.77	13,875.77	13,875.77	2,022,680.78	2,719,597.75			
6,783.41	27,953.99	29,867.59	3,407,521.69	3,853,261.82		29,564.37	86,031.95
			1,051,715.82	1,118,283.91			
4,560.25	7,723.49	7,856.77	937,604.29	1,126,075.63		11,976.79	16,872.36
3,726.43	7,895.51	8,579.39	1,164,537.00	1,346,538.27		8,226.50	10,079.05
338.50	2,261.84	2,532.52	727,541.22	761,302.90			
1,159.48	718.50	718.50	2,043,767.01	2,247,233.88		1,177.17	290.24
			38,517.07				
3,051.47			17,810.86	33,967.96	7,049,288.18	619.65	619.65
20,577.00	62,873.37	65,654.81	13,112,842.39	14,568,249.50	7,049,288.18	51,564.48	113,893.25
	3,365.36	1,628.68	562,225.87	250,538.39	194,307.70		12,077.88
	9,000.00	13,000.00					
2,106.73	2,906.19	3,619.50	612,946.27	1,727,459.20	388,921.93	3,572.55	5,202.97
	1,828.52	1,942.68	786,212.80	747,682.56	244,966.68		
	3,950.33	4,535.73	1,239,614.21	1,392,852.88	482,881.12		
1,448.65	7,193.69	9,881.73	243,279.95	495,823.30		6,643.71	1,722.38
				12,948.69	1,904.73		
24,132.38	91,117.46	100,263.13	16,557,121.49	19,195,554.52	8,362,270.34	61,780.74	132,896.48
24,132.38	91,117.46	100,263.13	16,557,121.49	19,195,554.52	8,362,270.34	61,780.74	132,896.48
11,930.70	28,681.79	27,749.84	10,737,923.27	11,238,650.51	6,376,000.00	9,724.53	76,261.78
	3,403.58	4,439.85	600,863.78	1,741,150.98	140,182.19	9,922.11	995.00
292.33						254.46	
			505,608.73		30,998.71		
12,223.03	32,085.37	32,189.69	11,844,395.78	12,979,801.49	6,547,180.90	19,901.10	77,256.78
3,273.00	18,459.32	19,479.32	2,372,302.10	2,633,039.05	482,208.32	21,852.93	24,281.48
1,448.65	7,193.69	9,881.73	243,279.95	495,823.30		6,643.71	1,722.38
4,721.65	25,653.01	29,361.05	2,615,582.05	3,128,862.35	482,208.32	28,496.64	26,003.86
2,069.30	7,318.21	8,250.16	312,076.73	434,349.49	850,000.00	2,275.47	2,738.22
	3,950.33	4,535.73	1,239,614.21	1,392,852.88	482,881.12		
5,118.40	22,110.54	25,926.50	545,452.72	1,259,688.31		11,107.53	26,897.62
7,187.70	33,379.08	38,712.39	2,097,143.66	3,086,890.68	1,332,881.12	13,383.00	29,635.84
24,132.38	91,117.46	100,263.13	16,557,121.49	19,195,554.52	8,362,270.34	61,780.74	132,896.48
53.9	35.1	35.6	71.5	69.4	78.2	32.2	59.2

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA
SYSTEM—Continued

Municipality Population	Townsend Township		Vaughan Township		Walkerville 7,303
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....					25,104.11
Substation equipment.....					57,391.73
Distribution system, overhead....	853.71	853.71	3,727.12	4,087.58	47,296.93
Distribution system, underground.....					
Line transformers.....	1,154.45	1,250.09	3,170.69	3,283.10	34,333.12
Meters.....	269.74	269.74	1,481.10	2,187.09	36,261.45
Street light equipment, regular.....			122.54	122.54	
Street light equip., ornamental.....					51,000.00
Misc. construction expense.....	85.55	85.55	499.90	499.90	33,982.18
Steam or hydraulic plant.....					*61,050.79
Old plant.....					18,335.05
Total plant.....	2,363.45	2,459.09	9,001.35	10,180.21	364,755.36
Bank and cash balance.....			1,360.53	78.00	50.00
Securities and investments.....					
Accounts receivable.....	1,242.55	140.91	1,046.29	399.58	65,650.91
Inventories.....					18,003.48
Sinking fund on local debentures.....					
Equity in Hydro systems.....	301.02	374.26	1,526.82	1,984.05	29,416.53
Other assets.....					1,553.82
Total assets.....	3,907.02	2,974.26	12,934.99	12,641.84	479,430.10
Deficit.....			3,492.98	3,954.08	
Total.....	3,907.02	2,974.26	16,427.97	16,595.92	479,430.10
LIABILITIES					
Debenture balance.....	2,374.98	2,290.80	7,340.80	7,091.90	170,489.74
Accounts payable.....			4,968.53	3,911.07	15,913.52
Bank overdraft.....					28,293.77
Other liabilities.....				48.18	51,000.00
Total liabilities.....	2,374.98	2,290.80	12,309.33	11,051.15	265,697.03
RESERVES					
For depreciation.....	1,006.00		1,932.62	2,652.62	48,466.00
For equity in H.E.P.C. system....	301.02	374.26	1,526.82	1,984.05	29,416.53
Total reserves.....	1,307.02	374.26	3,459.44	4,636.67	77,882.53
SURPLUS					
Debentures paid.....	225.02	309.20	659.20	908.10	23,769.26
Local sinking fund.....					1,437.54
Additional operating surplus.....					110,643.74
Total surplus.....	225.02	309.20	659.20	908.10	135,850.54
Total liabilities, reserves & surplus.....	3,907.02	2,974.26	16,427.97	16,595.92	479,430.10
Per cent of net debt to total assets.....	60.8	88.1	85.4	105.6	55.5

*Includes Ford City and Sandwich East.

“ A ”—Continued
of Hydro Municipalities as at December 31, 1922

Walkerville	Wallaceburg 3,921		Wardsville 212		Waterdown 815	
1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
115,734.07	1,735.58	1,735.58				200.00
66,590.05	2,234.15	2,332.26				
59,812.22	28,996.55	30,092.15	4,487.90	4,357.25	9,037.72	9,478.67
39,425.69	15,868.00	16,520.65	601.14	601.14	1,751.00	1,929.80
38,647.95	12,449.19	12,950.24	568.50	546.12	2,908.86	3,307.85
	1,723.26	2,089.26	489.73	489.73	199.07	207.98
51,000.00						
33,269.13	5,965.94	6,008.74	488.73	488.73	100.34	100.34
2,986.49						
18,335.05	19,485.49	19,485.49	193.94	193.94		
425,800.65	88,458.16	91,214.37	6,829.94	6,676.91	13,996.99	15,224.64
50.00	1,003.63	11,409.14	1,227.24	1,936.64	3,466.95	2,874.00
					3,500.00	3,500.00
94,395.92	24,301.87	25,889.13				284.80
37,210.28	6,811.06	5,533.48			35.00	35.00
45,323.26	1,727.78	6,031.76		14.50	1,406.13	2,127.14
3,989.59	178.96					
606,769.70	122,481.46	140,077.88	8,057.18	8,628.05	22,405.07	24,045.58
606,769.70	122,481.46	140,077.88	8,057.18	8,628.05	22,405.07	24,045.58
218,338.47	65,767.82	64,283.81	7,562.40	7,344.92	5,037.15	4,570.67
34,781.20	2,646.25	3,707.83	72.33	357.98	155.77	3.02
63,981.87						
53,646.60		69.00				
370,748.14	68,414.07	68,060.64	7,634.73	7,702.90	5,192.92	4,573.69
48,834.52	12,343.15	14,089.15		120.00	8,113.48	8,704.48
45,323.26	1,727.78	6,031.76		14.50	1,406.13	2,127.14
94,157.78	14,070.93	20,120.91		134.50	9,519.61	10,831.62
30,920.53	5,768.76	7,252.77		217.48	2,962.85	3,429.33
110,943.25	34,227.70	44,643.56	422.45	573.17	4,729.69	5,210.94
141,863.78	39,996.46	51,896.33	422.45	790.65	7,692.54	8,640.27
606,769.70	122,481.46	140,077.88	8,057.18	8,628.05	22,405.07	24,045.58
66.0	56.0	50.8	94.7	89.2	23.2	20.9

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA
SYSTEM—Continued

Municipality Population	Waterford 1,112		Waterloo 5,976		Waterloo
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....			13,489.34	13,489.34	
Substation equipment.....			49,709.32	49,794.43	
Distribution system, overhead....	7,715.29	8,338.54	44,956.55	49,807.26	334.38
Distribution system, underground.....					
Line transformers.....	3,301.87	3,517.10	14,599.93	18,777.65	1,015.13
Meters.....	2,899.98	3,343.58	17,595.34	19,498.92	355.49
Street light equipment, regular....	1,688.83	1,721.08	5,760.95	5,854.90	
Street light equip., ornamental.....					
Misc. construction expense.....	442.53	442.53	4,273.63	4,039.63	33.88
Steam or hydraulic plant.....			2,483.64		
Old plant.....	607.69	607.69	14,529.03	26,860.67	
Total plant.....	16,656.19	17,970.52	177,395.73	188,122.80	1,738.88
Bank and cash balance.....	67.53	810.26	6,822.06	1,022.27	
Securities and investments.....	3,000.00	3,000.00			
Accounts receivable.....	312.10	6.74	5,319.75	6,674.75	
Inventories.....			6,026.74	6,415.83	
Sinking fund on local debentures.....			3,456.00	3,744.00	
Equity in Hydro systems.....	260.46	1,104.40	7,823.50	12,951.62	
Other assets.....					
Total assets.....	20,296.28	22,891.92	206,843.78	218,931.27	1,738.88
Deficit.....					
Total.....	20,296.28	22,891.92	206,843.78	218,931.27	1,738.88
LIABILITIES					
Debenture balance.....			94,529.54	91,945.69	
Accounts payable.....	740.46	242.76	3,249.59	5,702.39	1,738.88
Bank overdraft.....					
Other liabilities.....	1,006.00				
Total liabilities.....	1,746.46	242.76	97,779.13	97,648.08	1,738.88
RESERVES					
For depreciation.....	1,484.40	3,155.40	43,052.63	46,555.09	
For equity in H.E.P.C. system....	260.46	1,104.40	7,823.50	12,951.62	
Total reserves.....	1,744.86	4,259.80	50,876.13	59,506.71	
SURPLUS					
Debentures paid.....	7,745.53	7,745.53	11,470.46	14,054.31	
Local sinking fund.....			3,456.00	3,744.00	
Additional operating surplus.....	9,059.43	10,643.83	43,262.06	43,978.17	
Total surplus.....	16,804.96	18,389.36	58,188.52	61,776.48	
Total liabilities, reserves & surplus.....	20,296.28	22,891.92	206,843.78	218,931.27	1,738.88
Per cent of net debt to total assets.	8.6	1.1	47.2	47.4	100.0

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

Township	Watford		Welland		Wellesley Police Village	
	1,039		8,880			
1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
			27,977.28	27,978.19		
			49,160.74	49,403.70		
334.38	8,008.99	8,928.63	102,108.17	107,066.55	4,363.44	5,030.72
1,015.13	2,489.96	2,816.11	26,131.54	28,795.44	1,311.47	1,499.76
355.49	2,810.81	3,183.70	26,354.99	28,675.11	1,266.99	1,587.90
	520.67	597.42	4,112.61	4,537.55	386.55	425.70
33.88	1,305.70	1,305.70	13,017.21	12,810.80	128.57	128.57
	657.44	657.44				
1,738.88	15,793.57	17,489.00	248,862.54	259,267.34	7,457.02	8,672.65
		147.02	961.54	100.00	4,110.59	2,748.08
		1,189.12	54,651.84	71,254.76	38.66	
			6,711.41	3,838.05		54.31
			31,475.39	35,597.72		
681.23		189.59	4,628.01	6,163.41		756.95
			4,143.24	4,368.34		
2,420.11	15,793.57	19,014.73	351,433.97	380,589.62	11,606.27	12,231.99
				1,542.31		
2,420.11	15,793.57	19,014.73	351,433.97	382,131.93	11,606.27	12,231.99
	8,024.54	7,629.10	200,000.00	199,048.54	6,365.29	6,077.86
1,738.88	929.51	595.37	28,383.98	50,164.81		193.12
	170.47		9,797.35	6,354.53		
			16,143.24	26,968.59		
1,738.88	9,124.52	8,224.47	254,324.57	282,536.47	6,365.29	6,270.98
	1,993.00	1,892.67	51,431.97	56,882.87	1,517.00	1,735.00
681.23		189.59	4,628.01	6,163.41		756.95
681.23	1,993.00	2,082.26	56,059.98	63,046.28	1,517.00	2,491.95
	1,688.67	2,084.11		951.46	1,134.71	1,422.14
			31,475.39	35,597.72		
	2,987.38	6,623.89	9,574.03		2,589.27	2,046.92
	4,676.05	8,708.00	41,049.42	36,549.18	3,723.98	3,469.06
2,420.11	15,793.57	19,014.73	351,433.97	382,131.93	11,606.27	12,231.99
71.8	57.8	43.7	72.4	75.9	54.8	54.7

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA
SYSTEM—Continued

Municipality	West Lorne		Weston		Windsor
Population	803		3,299		38,530
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....			3,230.94	3,230.94	14,167.01
Substation equipment.....			13,220.54	24,631.95	95,599.89
Distribution system, overhead....	6,195.23	6,298.51	22,222.34	27,488.26	286,227.53
Distribution system, underground.....					
Line transformers.....	2,641.15	2,737.62	16,101.80	17,234.20	134,000.19
Meters.....	1,804.12	1,953.88	9,952.70	11,357.63	129,726.85
Street light equipment, regular....	566.10	567.97	2,833.16	3,960.81	12,404.28
Street light equip., ornamental.....			6,481.83	12,654.74	245,094.02
Misc. construction expense.....	199.49	234.43	3,966.54	4,626.86	75,055.07
Steam or hydraulic plant.....					
Old plant.....	1,250.00	1,250.00			120,301.54
Total plant.....	12,656.09	13,042.41	78,009.85	105,185.39	1,112,576.38
Bank and cash balance.....	1,507.51	1,408.66	1,689.02	5,515.73	75.00
Securities and investments.....	2,000.00	4,000.00			*7,271.12
Accounts receivable.....	2,184.30	1,639.56	1,663.63	4,028.71	137,632.82
Inventories.....	114.89	48.24	315.73	325.43	101,596.70
Sinking fund on local debentures.....					21,387.32
Equity in Hydro systems.....		553.28	7,688.74	11,795.55	20,060.64
Other assets.....	160.00				
Total assets.....	18,622.79	20,692.15	89,366.97	126,850.81	1,400,599.98
Deficit.....					
Total.....	18,622.79	20,692.15	89,366.97	126,850.81	1,400,599.98
LIABILITIES					
Debenture balance.....	7,429.56	7,294.15	13,311.75	37,907.21	799,122.27
Accounts payable.....	979.99		3,636.46	8,344.64	36,246.62
Bank overdraft.....					16,295.99
Other liabilities.....					232,325.82
Total liabilities.....	8,409.55	7,294.15	16,948.21	46,251.85	1,083,990.70
RESERVES					
For depreciation.....	1,462.00	1,745.00	20,735.81	23,123.91	78,051.74
For equity in H.E.P.C. system....		553.28	7,688.74	11,795.55	20,060.64
Total reserves.....	1,462.00	2,298.28	28,424.55	34,919.46	98,112.38
SURPLUS					
Debentures paid.....	570.44	705.85	6,656.13	7,060.67	40,877.76
Local sinking fund.....					28,658.44
Additional operating surplus.....	8,180.80	10,393.87	37,338.08	38,618.83	148,960.70
Total surplus.....	8,751.24	11,099.72	43,994.21	45,679.50	218,496.90
Total liabilities, reserves & surplus.....	18,622.79	20,692.15	89,366.97	126,850.81	1,400,599.98
Per cent of net debt to total assets.	45.2	36.2	19.0	40.3	77.5

* Special Sinking Fund.

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

Windsor	Woodbridge		Woodstock		Wyoming	
	679		10,164		489	
1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
86,982.82			28,776.51	28,776.51		
175,891.72			49,205.24	49,789.53		
349,656.18	7,578.75	8,400.65	65,178.43	71,926.46	6,272.26	6,359.68
169,467.90	2,633.68	2,937.02	31,604.64	34,993.59	1,012.00	1,012.00
153,064.83	2,041.30	2,382.49	31,441.11	34,760.40	1,365.59	1,487.36
20,282.14	355.58	369.30	10,699.09	10,699.09	262.32	262.32
268,526.77						
82,176.69	642.82	642.82	17,832.81	18,359.55	805.20	805.20
120,301.54			14,908.62	14,908.62		
1,426,350.59	13,252.13	14,732.28	249,646.45	264,213.75	9,717.37	9,926.56
11,193.03	6,054.23	1,951.99	1,050.74	944.37	549.01	1,156.22
	500.00	4,993.58	15,000.00			
215,519.30	229.68	206.55	161.37		1,100.00	1,920.00
111,138.41		44.41	4,193.77	4,196.11		
40,298.24			30,187.49	22,892.37		
44,446.15	657.90	1,576.49	8,796.48	16,393.42		433.23
1,848,945.72	20,693.94	23,505.30	309,036.30	308,640.02	11,366.38	13,436.01
					1,343.34	1,229.01
1,848,945.72	20,693.94	23,505.30	309,036.30	308,640.02	12,709.72	14,665.02
1,082,316.60	7,691.71	7,529.91	77,385.63	67,385.63	8,288.60	7,895.30
65,398.08	103.15	839.21	12,188.07	5,235.27	1,572.97	2,995.87
265,074.50						
1,412,789.18	7,794.86	8,369.12	89,573.70	72,620.90	9,861.57	10,891.17
96,199.57	3,147.01	3,309.17	51,961.40	56,194.71	1,436.75	1,535.92
44,446.15	657.90	1,576.49	8,796.48	16,393.42		433.23
140,645.72	3,804.91	4,885.66	60,757.88	72,588.13	1,436.75	1,969.15
57,683.43	808.26	970.06	30,000.00	40,000.00	1,411.40	1,804.70
40,298.24			30,187.49	22,892.37		
197,529.15	8,285.91	9,280.46	98,517.23	100,538.62		
295,510.82	9,094.17	10,250.52	158,704.72	163,430.99	1,411.40	1,804.70
1,848,945.72	20,693.94	23,505.30	309,036.30	308,640.02	12,709.72	14,665.02
78.4	37.6	38.2	29.8	24.8	86.7	83.7

STATEMENT

Comparative Balance Sheets of Electrical Departments

NIAGARA SYSTEM—Continued

Municipality Population	York Township		Zurich Police Village	
	1921	1922	1921	1922
	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS				
Lands and buildings.....				
Substation equipment.....				
Distribution system, overhead....	169,086.51	219,491.64	3,745.67	3,822.92
Distribution system, underground				
Line transformers.....			991.96	991.96
Meters.....			1,149.14	1,242.49
Street light equipment, regular....	3,752.94	7,077.12	395.77	395.77
Street light equip., ornamental....				
Misc. construction expense.....	6,636.11	6,665.16	273.30	273.30
Steam or hydraulic plant.....				
Old plant.....			150.00	150.00
Total plant.....	179,475.56	233,233.92	6,705.84	6,876.44
Bank and cash balance.....	19,772.79		802.86	1,063.42
Securities and investments.....			4,000.00	4,000.00
Accounts receivable.....	1,090.19	8,954.72		191.16
Inventories.....				
Sinking fund on local debentures..				
Equity in Hydro systems.....				162.02
Other assets.....	124.46	72.58		
Total assets.....	200,463.00	242,261.22	11,508.70	12,293.04
Deficit.....				
Total.....	200,463.00	242,261.22	11,508.70	12,293.04
LIABILITIES				
Debenture balance.....	200,000.00	194,563.10	5,330.28	5,233.45
Accounts payable.....		33,131.65	533.38	
Bank overdraft.....		853.41		
Other liabilities.....	463.00	463.00		
Total liabilities.....	200,463.00	229,011.16	5,863.66	5,233.45
RESERVES				
For depreciation.....		3,994.00	1,008.00	1,175.00
For equity in H.E.P.C. system....				162.02
Total reserves.....		3,994.00	1,008.00	1,337.02
SURPLUS				
Debentures paid.....		5,436.90	261.33	358.16
Local sinking fund.....				
Additional operating surplus.....		3,819.16	4,375.71	5,364.41
Total surplus.....		9,256.06	4,637.04	5,722.57
Total liabilities, reserves & surplus	200,463.00	242,261.22	11,508.70	12,293.04
Per cent of net debt to total assets.	100.0	94.5	50.9	43.1

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

NIAGARA SYSTEM SUMMARY		SEVERN SYSTEM					
		Alliston 1,321		Barrie 6,888		Beeton 586	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
2,818,744.64	2,885,585.33			12,403.21	12,403.21		
5,133,322.15	4,756,865.14	675.73	675.73	4,682.98	4,682.98	428.50	428.50
6,433,499.32	9,069,206.23	20,510.82	20,662.10	32,806.69	36,032.98	10,278.29	10,434.27
1,264,151.25	1,365,112.82						
2,538,437.83	3,018,885.71	4,492.26	4,599.67	7,550.38	9,812.65	1,731.74	1,731.74
2,919,432.63	3,340,018.48	4,450.97	4,621.14	23,131.94	25,263.53	800.27	1,015.45
1,134,755.32	1,210,243.65	1,330.21	1,354.92	3,436.79	4,004.51	913.98	913.98
529,837.95	585,333.25						
2,756,487.60	2,980,590.12	2,856.02	3,105.92	1,153.73	766.23	1,432.19	1,432.19
169,519.19	32,811.52						
613,619.05	7,701,621.91	8,079.10	8,146.49	44,593.61	41,587.61		
26,311,806.93	36,946,274.16	42,395.11	43,165.97	129,759.33	134,553.70	15,584.97	15,956.13
769,442.64	820,900.60	1,570.27	1,048.99		1,290.03	.01	411.99
321,475.53	310,880.37			45,000.00	44,570.38		
1,881,013.04	3,436,324.31	277.64	307.60	8,648.80	9,085.88	270.07	270.07
1,333,781.17	1,584,368.95		151.83	2,048.92	2,670.51		53.69
1,948,212.30	2,771,893.70	1,688.30	2,167.13				
702,052.61	1,391,696.62			4,746.99	7,412.47		
77,870.57	224,134.27			14.22	13,118.85		
33,345,654.79	47,486,472.98	45,931.32	46,841.52	190,218.26	212,701.82	15,855.05	16,691.88
22,682.87	27,564.75	7,772.08	3,630.81			7,137.51	2,587.53
33,368,337.66	47,514,037.73	53,703.40	50,472.33	190,218.26	212,701.82	22,992.56	19,279.41
18,311,803.60	26,718,520.38	39,782.50	39,551.95	30,557.28	28,480.45	14,288.26	14,026.90
1,372,855.40	3,261,878.53	7,952.10	3,362.20	6,435.76	2,938.27	6,276.56	2,439.00
727,938.21	395,035.84			811.50			
898,824.29	562,555.88			350.00			
21,311,421.50	30,937,990.63	47,734.50	42,914.15	38,154.54	31,418.72	20,564.82	16,465.90
4,649,746.01	5,594,142.01	4,063.00	4,863.00	24,571.40	27,309.40	1,716.00	1,840.41
706,731.15	1,391,696.62			4,746.99	7,412.47		
5,356,477.16	6,985,838.63	4,063.00	4,863.00	29,318.39	34,721.87	1,716.00	1,840.41
1,320,806.67	2,488,940.38	217.50	448.05	56,442.72	58,519.55	711.74	973.10
1,948,212.30	2,771,893.70	1,688.30	2,247.13				
3,431,420.03	4,329,374.39			66,302.61	88,041.68		
6,700,439.00	9,590,208.47	1,905.80	2,695.18	122,745.33	146,561.23	711.74	973.10
33,368,337.66	47,514,037.73	53,703.40	50,472.33	190,218.26	212,701.82	22,992.56	19,279.41
63.8	67.1	104.0	99.4	20.5	15.3	130.0	98.6

STATEMENT

Comparative Balance Sheets of Electrical Departments

SEVERN
SYSTEM—Continued

Municipality	Bradford		Coldwater		Collingwood
Population	1,028		647		6,237
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....			275.00	275.00	11,819.32
Substation equipment.....	388.50	388.50			11,212.59
Distribution system, overhead....	14,133.28	14,474.97	6,099.18	6,348.62	36,711.44
Distribution system, underground					
Line transformers.....	1,311.23	1,362.34	2,129.32	2,472.67	10,187.24
Meters.....	1,757.43	1,934.06	1,607.51	1,780.20	17,254.49
Street light equipment, regular...	544.95	544.95	372.82	372.82	2,641.67
Street light equip., ornamental....					
Misc. construction expense.....	1,691.36	1,691.36	132.53	132.53	5,797.95
Steam or hydraulic plant.....					
Old plant.....					352.17
Total plant.....	19,826.75	20,396.18	10,616.36	11,381.84	95,976.87
Bank and cash balance.....	75.83	502.27	765.42	1,151.48	
Securities and investments.....					5,000.00
Accounts receivable.....	480.20	340.20	1,928.74	4,494.08	6,682.77
Inventories.....	108.44	42.41			702.92
Sinking fund on local debentures.					
Equity in Hydro systems.....			696.55	1,018.92	14,945.96
Other assets.....					
Total assets.....	20,491.22	21,281.06	14,007.07	18,046.32	123,308.52
Deficit.....	10,023.83	7,636.86			
Total.....	30,515.05	28,917.92	14,007.07	18,046.32	123,308.52
LIABILITIES					
Debenture balance.....	15,022.19	18,404.03	6,060.48	5,912.17	20,901.03
Accounts payable.....	12,821.05	7,184.60	2,453.31	1,536.34	12,471.52
Bank overdraft.....					1,147.54
Other liabilities.....					
Total liabilities.....	27,843.24	25,588.63	8,513.79	7,448.51	34,520.09
RESERVES					
For depreciation.....	2,094.00	2,533.32	3,458.37	3,793.12	24,105.43
For equity in H.E.P.C. system....			696.55	1,018.92	14,945.96
Total reserves.....	2,094.00	2,533.32	4,154.92	4,812.04	39,051.39
SURPLUS					
Debentures paid.....	577.81	795.97	939.52	1,087.83	18,509.26
Local sinking fund.....					
Additional operating surplus.....			398.84	4,697.94	31,227.78
Total surplus.....	577.81	795.97	1,338.36	5,785.77	49,737.04
Total liabilities, reserves & surplus	30,515.05	28,917.92	14,007.07	18,046.32	123,308.52
Per cent of net debt to total assets.	135.6	120.2	60.8	43.7	28.1

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

Collingwood	Cookstown Police Village		Creemore 540		Elmvale Police Village	
1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
12,679.34	60.00	60.00	.....	.....	106.25	106.25
11,212.59	392.95	392.95	.....	.....	.....	.....
37,570.67	8,403.84	8,457.09	4,982.12	5,013.28	6,656.60	6,662.94
.....
11,099.25	1,720.59	1,720.59	1,161.81	1,161.81	2,203.94	2,203.94
18,451.39	1,124.92	1,165.08	1,564.80	1,801.75	1,800.66	1,900.79
2,641.67	514.21	514.21	272.07	272.07	317.98	317.98
.....
7,945.11	1,453.55	1,464.15	185.41	185.41	455.93	455.93
.....
529.75	.....	.....	2,651.15	2,651.15	.....	.....
.....
102,129.77	13,670.06	13,774.07	10,817.36	11,085.47	11,541.36	11,647.83
.....
8,476.05	800.57	450.07	2,834.69	5,537.73	805.96	2,419.17
.....
24,254.96	197.96	1,310.65	73.34	2,991.89	1,008.65	3,206.15
2,385.68	.....	.....	27.51	.....	194.11	192.38
.....
21,355.66	.....	.....	769.52	1,198.58	1,030.92	1,601.67
.....	.....	.....	1,466.34	.....	.....	.....
.....
158,602.12	14,668.59	15,534.79	15,988.76	20,813.67	14,581.00	19,067.20
.....	2,160.68	.....	.....	.....	.....	.....
.....
158,602.12	16,829.27	15,534.79	15,988.76	20,813.67	14,581.00	19,067.20
.....
.....
19,248.65	9,014.23	12,837.67	5,016.88	4,751.20	5,838.24	5,674.78
908.24	5,870.27	.....	.....	.....	.....	.....
.....
.....
.....
20,156.89	14,884.50	12,837.67	5,016.88	4,751.20	5,838.24	5,674.78
.....
.....
.....
26,745.43	1,459.00	1,761.00	2,087.37	2,153.26	3,307.00	3,657.00
21,355.66	.....	.....	769.52	1,198.58	1,030.92	1,601.67
.....
48,101.09	1,459.00	1,761.00	2,856.89	3,351.84	4,337.92	5,258.67
.....
.....
.....
20,161.64	485.77	627.33	1,483.12	1,748.80	1,161.76	1,325.22
.....
70,182.50	.....	308.79	6,631.87	10,961.83	3,243.08	6,808.53
.....
90,344.14	485.77	936.12	8,114.99	12,710.63	4,404.84	8,133.75
.....
158,602.12	16,829.27	15,534.79	15,988.76	20,813.67	14,581.00	19,067.20
.....
.....
14.7	101.2	82.6	31.2	24.2	40.0	32.5

STATEMENT

Comparative Balance Sheets of Electrical Departments

SEVERN SYSTEM—Continued

Municipality	Midland		Penetanguishene		Port
Population	7,022		3,920		576
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....	10,864.80	10,864.80	2,151.00	2,151.00	202.60
Substation equipment.....	19,926.49	20,644.94	3,507.71	3,507.71	.....
Distribution system, overhead....	65,853.32	68,734.02	32,711.06	34,552.61	6,017.49
Distribution system, underground					
Line transformers.....	13,686.22	13,686.22	9,817.36	11,388.68	339.98
Meters.....	20,644.80	22,353.31	8,964.08	9,882.70	1,119.26
Street light equipment, regular....	4,707.93	4,917.13	2,312.30	2,314.30	166.73
Street light equip., ornamental.....					
Misc. construction expense.....	6,301.33	7,042.58	823.69	1,221.91	513.92
Steam or hydraulic plant.....					
Old plant.....	14,515.62	14,515.62	2,374.20	2,374.20	.....
Total plant.....	156,500.51	162,758.72	62,661.40	67,393.11	8,359.98
Bank and cash balance.....	8,007.64	6,839.91	2,214.36	.....	431.85
Securities and investments.....					
Accounts receivable.....	4,470.94	23,971.88	2,247.68	22,356.68	231.49
Inventories.....	7,249.34	11,348.60	956.94	1,404.28	.....
Sinking fund on local debentures.....					
Equity in Hydro systems.....	8,943.52	13,054.33	10,721.47	13,530.85	210.09
Other assets.....					
Total assets.....	185,171.95	217,973.44	78,801.85	104,684.92	9,233.41
Deficit.....					2,395.69
Total.....	185,171.95	217,973.44	78,801.85	104,684.92	11,629.10
LIABILITIES					
Debenture balance.....	53,940.34	81,253.83	23,543.67	22,637.78	6,351.89
Accounts payable.....	35,957.11	.....	9,136.91	10,000.00	2,887.01
Bank overdraft.....				1,006.25	.....
Other liabilities.....					
Total liabilities.....	89,897.45	81,253.83	32,680.58	33,644.03	9,238.90
RESERVES					
For depreciation.....	30,703.31	34,488.31	18,926.48	20,910.48	1,232.00
For equity in H.E.P.C. system....	8,943.52	13,054.33	10,721.47	13,530.85	210.09
Total reserves.....	39,646.83	47,542.64	29,647.95	34,441.33	1,442.09
SURPLUS					
Debentures paid.....	28,129.65	30,816.16	7,456.33	8,362.22	948.11
Local sinking fund.....					
Additional operating surplus.....	27,498.02	58,360.81	9,016.99	28,237.34	.....
Total surplus.....	55,627.67	89,176.97	16,473.32	36,599.56	948.11
Total liabilities, reserves & surplus	185,171.95	217,973.44	78,801.85	104,684.92	11,629.10
Per cent of net debt to total assets.	48.5	39.6	41.5	36.9	100.2

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

McNicol	Stayner 1,004		Thornton Police Village		Tottenham 512	
	1921	1922	1921	1922	1921	1922
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
202.60		200.00			358.50	358.50
6,062.34	8,526.56	8,889.58	5,923.77	5,923.77	7,437.89	7,641.79
339.98	2,761.04	2,867.83	606.88	606.88	1,117.48	1,117.48
1,135.12	2,349.30	2,623.23	351.87	369.01	1,315.78	1,477.66
166.73	529.31	790.02	375.90	375.90	460.17	460.17
546.42	310.33	310.33	300.35	300.35	1,287.37	1,287.37
	4,132.41	4,132.41			361.45	361.45
8,453.19	18,808.95	19,813.40	7,558.77	7,575.91	12,338.64	12,654.42
191.18	2,051.21	2,106.76	173.29	186.68	162.61	1,199.17
	100.00	3,917.77			168.14	
	145.55	60.15				
346.30	840.89	1,665.12				
8,990.67	21,946.60	27,563.20	7,732.06	7,762.59	12,669.39	13,853.59
300.82			3,079.20	2,905.07	6,201.73	4,454.51
9,291.49	21,946.60	27,563.20	10,811.26	10,667.66	18,871.12	18,308.10
6,099.85	10,812.68	10,240.83	7,166.42	6,942.69	8,840.65	8,258.48
211.19	718.56		2,421.26	2,096.66	7,399.58	6,658.18
6,311.04	11,531.24	10,240.83	9,587.68	9,039.35	16,240.23	14,916.66
1,434.00	3,472.88	3,905.88	890.00	1,071.00	1,004.44	1,182.82
346.30	840.89	1,665.12				
1,780.30	4,313.77	5,571.00	890.00	1,071.00	1,004.44	1,182.82
1,200.15	3,187.32	3,759.17	333.58	557.31	1,626.45	2,208.62
	2,914.27	7,992.20				
1,200.15	6,101.59	11,751.37	333.58	557.31	1,626.45	2,208.62
9,291.49	21,946.60	27,563.20	10,811.26	10,667.66	18,871.12	18,308.10
73.1	52.6	39.7	124.2	119.3	128.5	107.7

STATEMENT

Comparative Balance Sheets of Electrical Departments

SEVERN SYSTEM—Continued

Municipality Population	Victoria Harbor 1,485		Waubashene Police Village		SEVERN SYSTEM SUMMARY	
	1921	1922	1921	1922	1921	1922
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS						
Lands and buildings.....					37,882.18	38,742.20
Substation equipment.....					41,773.95	42,492.40
Distribution system, overhead....	4,950.98	5,037.17	2,856.97	2,892.10	274,860.30	285,390.30
Distribution system, underground						
Line transformers.....	825.92	825.92	416.56	490.42	62,059.95	67,488.07
Meters.....	1,676.40	1,825.11	918.54	918.54	90,833.05	98,468.07
Street light equipment, regular...	145.69	145.69	159.22	159.22	19,201.93	20,266.27
Street light equip., ornamental...						
Misc. construction expense.....	642.64	642.64	257.66	257.66	25,595.96	28,788.19
Steam or hydraulic plant.....						
Old plant.....					77,059.71	74,298.68
Total plant.....	8,121.40	8,476.53	4,608.95	4,717.94	629,267.00	655,934.18
Bank and cash balance.....	427.67	2,060.39	1,293.95	1,638.70	21,640.71	35,510.57
Securities and investments.....					50,000.00	44,570.38
Accounts receivable.....	458.77	1,532.11		664.50	28,736.98	98,704.42
Inventories.....					11,433.73	18,309.53
Sinking fund on local debentures...					1,688.30	2,167.13
Equity in Hydro systems.....	152.22	523.17	167.78	272.25	43,389.95	61,979.32
Other assets.....					14.22	13,118.85
Total assets.....	9,160.06	12,592.20	6,070.68	7,293.39	786,170.89	930,294.38
Deficit.....					38,770.72	21,515.60
Total.....	9,160.06	12,592.20	6,070.68	7,293.39	824,941.61	951,809.98
LIABILITIES						
Debenture balance.....	5,459.63	4,958.96	2,836.33	2,701.36	265,189.07	291,981.58
Accounts payable.....	220.00		330.53		113,131.53	37,334.68
Bank overdraft.....					1,959.04	1,006.25
Other liabilities.....					350.00	
Total liabilities.....	5,679.63	4,958.96	3,166.86	2,701.36	380,629.64	330,322.51
RESERVES						
For depreciation.....	1,218.89	1,790.37	917.00	892.51	125,578.57	140,331.31
For equity in H.E.P.C. system...	152.22	523.17	167.78	272.25	43,389.95	61,979.32
Total reserves.....	1,371.11	2,313.54	1,084.78	1,164.76	168,968.52	202,310.63
SURPLUS						
Debentures paid.....	1,040.37	1,541.04	663.67	798.64	124,158.31	134,930.80
Local sinking fund.....					1,688.30	4,875.76
Additional operating surplus.....	1,068.95	3,778.66	1,155.37	2,628.63	149,496.84	279,370.28
Total surplus.....	2,109.32	5,319.70	1,819.04	3,427.27	275,343.45	419,176.84
Total liabilities, reserves & surplus	9,160.06	12,592.20	6,070.68	7,293.39	824,941.61	951,809.98
Per cent of net debt to total assets.	63.0	41.1	52.2	38.5	48.5	38.1

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

EUGENIA
SYSTEM

Arthur 1,222		Chatsworth 287		Chesley 1,803		Derby Township	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
		65.00	65.00				
				595.98	595.98		
15,075.50	15,328.82	3,677.56	3,717.09	16,960.12	17,263.20	90.41	90.41
3,849.78	3,849.78	667.79	667.69	3,880.77	4,117.30	73.32	73.32
2,073.40	2,216.34	573.08	606.48	3,845.01	4,193.38	32.05	32.05
539.71	609.16	207.29	207.29	824.75	1,017.36		
245.82	245.82	385.90	385.90	3,089.66	3,089.66	14.68	14.68
1,101.47	1,101.47			5,503.60	5,503.60		
22,885.68	23,351.39	5,576.52	5,649.45	34,699.89	35,780.56	210.46	210.46
163.60	25.25	586.14	260.98		1,144.57		
219.09	46.45	425.52	512.48		214.30		
25.00				275.00	155.00		
		708.34	1,104.21				
	1,640.04	207.96	442.01		1,777.53		
23,293.37	25,063.13	7,504.47	7,969.13	34,974.89	39,071.96	210.46	210.46
16,927.24	13,735.44	1,790.61	617.89	4,570.83			
40,220.61	38,798.57	9,295.08	8,587.02	39,545.72	39,071.96	210.46	210.46
19,774.14	19,434.97	5,321.60	5,278.83	22,487.65	21,432.23		
15,183.61	11,556.03	1,963.64	548.23	6,712.01	57.28	210.46	210.46
				352.71			
34,957.75	30,991.00	7,285.24	5,827.06	29,552.37	21,489.51	210.46	210.46
4,037.00	4,602.50	1,015.14	1,092.57	4,981.00	5,708.00		
	1,640.04	207.96	442.01		1,777.53		
4,037.00	6,242.54	1,223.10	1,534.58	4,981.00	7,485.53		
1,225.86	1,565.03	78.40	121.17	5,012.35	6,067.77		
		708.34	1,104.21				
					4,029.15		
1,225.86	1,565.03	786.74	1,225.38	5,012.35	10,096.92		
40,220.61	38,798.57	9,295.08	8,587.02	39,545.72	39,071.96	210.46	210.46
149.8	132.5	97.2	77.5	84.2	57.6	100.0	100.0

STATEMENT

Comparative Balance Sheets of Electrical Departments

EUGENIA
SYSTEM—Continued

Municipality	Dundalk		Durham		Elmwood
Population	725		1,622		
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....					
Substation equipment.....			584.88	584.88	
Distribution system, overhead....	5,997.03	6,060.56	15,214.52	15,598.72	4,625.34
Distribution system, underground					
Line transformers.....	1,404.81	1,404.81	5,594.45	5,594.45	803.88
Meters.....	953.09	1,006.19	3,162.01	3,357.98	622.53
Street light equipment, regular...	630.38	648.09	846.90	858.57	297.48
Street light equip., ornamental....					
Misc. construction expense.....	228.69	228.69	580.74	580.74	1,093.62
Steam or hydraulic plant.....					
Old plant.....	380.94	380.94	1,506.51	1,506.51	
Total plant.....	9,594.94	9,729.28	27,490.01	28,081.85	7,442.85
Bank and cash balance.....	1,189.64	907.91	647.49		101.23
Securities and investments.....	1,000.00	1,000.00			
Accounts receivable.....	130.00	794.36	560.98	8,422.19	35.39
Inventories.....			108.87		
Sinking fund on local debentures.					104.16
Equity in Hydro systems.....	567.51	1,071.80	1,106.57	2,671.60	
Other assets.....					
Total assets.....	12,482.09	13,503.35	29,913.92	39,175.64	7,683.63
Deficit.....	41.72		2,633.10		1,857.92
Total.....	12,523.81	13,503.35	32,547.02	39,175.64	9,541.55
LIABILITIES					
Debenture balance.....	4,014.01	3,816.26	14,768.71	21,293.74	6,404.02
Accounts payable.....	3,908.57	589.41	1,938.72	1,072.23	1,592.42
Bank overdraft.....				110.48	
Other liabilities.....			7,672.53		
Total liabilities.....	7,922.58	4,405.67	24,379.96	22,476.45	7,996.44
RESERVES					
For depreciation.....	1,710.83	1,959.83	3,829.29	4,173.60	644.97
For equity in H.E.P.C. system....	567.51	1,071.80	1,106.57	2,671.60	
Total reserves.....	2,278.34	3,031.63	4,935.86	6,845.20	644.97
SURPLUS					
Debentures paid.....	2,322.89	2,520.64	3,231.29	4,506.26	795.98
Local sinking fund.....					104.16
Additional operating surplus.....		3,545.41		5,347.73	
Total surplus.....	2,322.89	6,066.05	3,231.29	9,853.99	900.14
Total liabilities, reserves & surplus	12,523.81	13,503.35	32,547.02	39,175.64	9,541.55
Per cent of net debt to total assets.	63.2	35.6	81.6	61.6	104.0

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

Police Vil.	Flesherton		Grand Valley		Hanover	
	410		583		2,695	
1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	.....	.....	36.50	36.50	64.80	64.80
.....	.....	.....	.....	.....	6,112.60	9,271.19
4,661.67	4,531.29	4,611.55	8,738.45	8,840.38	42,792.61	43,748.77
.....
803.88	324.62	324.62	711.05	711.05	13,759.79	13,761.33
624.18	832.80	849.90	1,370.74	1,538.99	11,484.00	10,983.57
302.28	384.61	384.61	458.21	458.21	2,262.82	2,291.18
.....
1,093.62	869.12	869.12	202.70	205.70	6,407.38	6,168.84
.....
.....	.....	.....	919.85	919.85	2,370.91	2,370.91
.....
7,485.63	6,942.44	7,039.80	12,437.50	12,710.68	85,254.91	88,660.59
215.44	391.64	1,156.88	2,105.75	1,766.21	.....	10,843.87
.....
37.09	971.38	1,339.25	37.84	1,423.00	8,251.23	13,988.94
.....	25.00	.....	17.00	.....	1,375.43	300.00
127.68	.....	.....	.....	.....	.....	.....
.....	355.06	625.95	.....	637.62	.....	5,751.64
.....	.....	.....	.....	.....	2,758.90	.....
.....
7,865.84	8,685.52	10,161.88	14,598.09	16,537.51	94,881.57	119,545.04
765.98	2,667.49	969.40	991.53	.....	4,666.98	.....
.....
8,631.82	11,353.01	11,131.28	15,589.62	16,537.51	99,548.55	119,545.04
.....
.....
6,186.76	6,136.92	5,993.36	9,314.34	8,914.17	66,795.08	78,012.29
506.17	2,943.43	2,263.81	2,477.97	.....	10,212.16	6,408.24
.....	.....	.....	.....	.....	6,446.39	.....
.....
6,692.93	9,080.35	8,257.17	11,792.31	8,914.17	83,453.63	84,420.53
.....
.....
797.97	1,354.52	1,541.52	2,111.65	2,397.75	9,390.00	10,740.25
.....	355.06	625.95	.....	637.62	.....	5,751.64
.....
797.97	1,709.58	2,167.47	2,111.65	3,035.37	9,390.00	16,491.89
.....
.....
1,013.24	563.08	706.64	1,685.66	2,085.83	6,704.92	9,487.71
127.68	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	2,502.14	.....	9,144.91
.....
1,140.92	563.08	706.64	1,685.66	4,587.97	6,704.92	18,632.62
.....
8,631.82	11,353.01	11,131.28	15,589.62	16,537.51	99,548.55	119,545.04
.....
.....
85.0	104.8	86.8	80.7	56.1	87.9	74.2

STATEMENT

Comparative Balance Sheets of Electrical Departments

EUGENIA
SYSTEM—Continued

Municipality	Holstein Police Vil.		Kincardine		Lucknow
Population			2,159		887
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....			3,734.20	4,445.65	
Substation equipment.....			3,580.18	2,869.48	
Distribution system, overhead....	1,939.55	1,969.80	32,809.77	33,704.29	13,692.64
Distribution system, underground.....					
Line transformers.....	455.22	455.22	3,633.21	5,254.13	1,920.16
Meters.....	255.84	341.07	4,318.76	5,234.82	1,183.34
Street light equipment, regular....	168.69	168.69	3,796.16	3,796.16	972.06
Street light equip., ornamental....					
Misc. construction expense.....	170.25	170.25	4,566.24	5,316.31	1,951.98
Steam or hydraulic plant.....					
Old plant.....					
Total plant.....	2,989.55	3,105.03	56,438.52	60,620.84	19,720.18
Bank and cash balance.....	61.53	155.63	416.77	247.61	163.21
Securities and investments.....					
Accounts receivable.....	275.57	280.14	558.52	791.39	
Inventories.....	15.00		2,240.36	954.49	25.00
Sinking fund on local debentures.....			3,342.36	3,482.36	
Equity in Hydro systems.....		219.96			
Other assets.....					
Total assets.....	3,341.65	3,760.76	62,996.53	66,096.69	19,908.39
Deficit.....	4,921.02	4,064.54	6,817.80	10,491.23	548.02
Total.....	8,262.67	7,825.30	69,814.33	76,587.92	20,456.41
LIABILITIES					
Debenture balance.....	2,169.42	2,050.79	43,112.62	61,960.00	10,450.99
Accounts payable.....	5,083.93	4,424.88	22,271.97	7,859.56	9,743.25
Bank overdraft.....					
Other liabilities.....					
Total liabilities.....	7,253.35	6,475.67	65,384.59	69,819.56	20,194.24
RESERVES					
For depreciation.....	416.69	418.41		1,046.00	
For equity in H.E.P.C. system.....		219.96			
Total reserves.....	416.69	638.37		1,046.00	
SURPLUS					
Debentures paid.....	592.63	711.26	1,087.38	2,240.00	262.17
Local sinking fund.....			3,342.36	3,482.36	
Additional operating surplus.....					
Total surplus.....	592.63	711.26	4,429.74	5,722.36	262.17
Total liabilities, reserves & surplus.....	8,262.67	7,825.30	69,814.33	76,587.92	20,456.41
Per cent of net debt to total assets.....	217.5	182.8	103.7	111.5	101.5

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

Lucknow	Markdale		Mount Forest		Neustadt	
	908		1,761		445	
	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
	780.80	780.80	3,725.00	3,725.00		
13,837.96	7,136.28	7,279.83	686.75	686.75		
			16,446.19	17,054.27	9,465.54	9,530.16
2,050.70	2,108.87	2,108.87	3,375.54	3,375.54	3,490.29	4,396.03
2,085.54	1,866.33	1,961.20	3,735.19	3,903.44	1,308.92	1,511.52
972.06	530.79	530.79	1,655.77	1,680.22	496.41	496.41
					1,495.88	1,495.88
2,079.48	587.06	587.06	1,796.02	1,796.02		
	2,080.65	2,080.65	3,958.97	3,958.97	1,097.60	1,097.60
21,025.74	15,090.78	15,329.20	35,379.43	36,180.21	17,354.64	18,527.60
410.60	731.58	941.70	385.91	410.57	479.81	496.14
			3,887.83	3,887.83		
7.80	378.80	2,257.95	170.63	1,351.75	479.81	6,342.58
	2,093.76	700.00	964.55	122.45	483.79	
	105.07	451.71	1,653.59	3,137.30		
21,444.14	18,399.99	19,680.56	42,441.94	45,090.11	18,798.05	25,366.32
			13,292.76	578.75	7,704.21	3,928.61
21,444.14	18,399.99	19,680.56	55,734.70	45,668.86	26,502.26	29,294.93
18,939.94	8,206.23	8,044.76	23,145.38	22,322.84	15,788.18	15,230.19
166.07	3,985.01	2,561.85	17,615.48	5,536.50	8,017.26	10,438.93
19,106.01	12,191.24	10,606.61	40,760.86	27,859.34	23,805.44	25,669.12
366.00	2,331.20	2,703.05	5,507.03	6,036.46	1,485.00	1,856.00
	105.07	451.71	1,653.59	3,137.30		
366.00	2,436.27	3,154.76	7,160.62	9,173.76	1,485.00	1,856.00
783.42	793.77	955.24	7,813.22	8,635.76	1,211.82	1,769.81
1,188.71	2,978.71	4,963.95				
1,972.13	3,772.48	5,919.19	7,813.22	8,635.76	1,211.82	1,769.81
21,444.14	18,399.99	19,680.56	55,734.70	45,668.86	26,502.26	29,294.93
89.0	66.3	54.8	96.00	66.5	126.7	101.1

STATEMENT

Comparative Balance Sheets of Electrical Departments

EUGENIA
SYSTEM—Continued

Municipality	Orangeville		Owen Sound		Priceville
Population	2,503		12,360		
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....	2,517.00	2,517.00	28,953.74	28,953.74	68.00
Substation equipment.....	1,169.00	1,169.00	8,464.45	8,464.45	
Distribution system, overhead....	21,407.50	21,741.82	65,948.46	68,965.81	4,621.29
Distribution system, underground					
Line transformers.....	2,760.57	3,057.82	24,234.90	25,921.18	499.70
Meters.....	4,179.29	4,792.07	33,214.26	35,422.88	247.16
Street light equipment, regular....	1,139.49	1,149.67	10,179.09	10,259.21	139.88
Street light equip., ornamental....			500.00	500.00	
Misc. construction expense.....	3,331.69	3,331.69	2,003.96	2,003.96	833.90
Steam or hydraulic plant.....			32,282.00	33,282.00	
Old plant.....	3,204.99	3,204.99			
Total plant.....	39,709.53	40,964.06	206,780.86	213,773.23	6,409.93
Bank and cash balance.....	1,232.37	1,076.10		4,752.47	98.63
Securities and investments.....					
Accounts receivable.....	34.93	128.58	5,512.87	10,644.98	114.43
Inventories.....	568.16	370.00	16,526.65	16,697.41	
Sinking fund on local debentures....			102,633.22	110,605.47	
Equity in Hydro systems.....		1,474.48	7,771.53	15,280.62	
Other assets.....			217.40	132.05	
Total assets.....	41,544.99	44,013.22	339,442.53	371,886.23	6,622.99
Deficit.....	10,095.32	6,265.45			229.74
Total.....	51,640.31	50,278.67	339,442.53	371,886.23	6,852.73
LIABILITIES					
Debenture balance.....	28,535.37	27,028.56	141,000.00	141,000.00	5,836.90
Accounts payable.....	11,445.81	7,876.39	20,069.53	21,537.39	852.73
Bank overdraft.....			5,120.56		
Other liabilities.....					
Total liabilities.....	39,981.18	34,904.95	166,190.09	162,537.39	6,689.63
RESERVES					
For depreciation.....	6,144.50	6,877.80	32,444.07	32,407.23	
For equity in H.E.P.C. system....		1,474.48	7,771.53	15,280.62	
Total reserves.....	6,144.50	8,352.28	40,215.60	47,687.85	
SURPLUS					
Debentures paid.....	5,514.63	7,021.44			163.10
Local sinking fund.....			102,633.22	110,605.47	
Additional operating surplus.....			30,403.62	51,055.52	
Total surplus.....	5,514.63	7,021.44	133,036.84	161,660.99	163.10
Total liabilities, reserves & surplus	51,640.31	50,278.67	339,442.50	371,886.23	6,852.73
Per cent of net debt to total assets.	96.4	82.0	48.9	45.6	101.2

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

Police Vil.	Ripley Police Village		Shelburne 1,101		Tara 521	
	1922	1921	1922	1921	1922	1921
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
68.00			800.00	800.00		
4,621.29	8,389.06	8,571.66	566.60	566.60	10,194.26	10,221.81
549.70	2,592.36	2,592.36	12,825.50	12,939.97		
247.16	438.91	476.70			1,706.89	1,706.89
139.88	834.03	834.03	3,137.39	3,251.98	1,165.78	1,221.88
			3,145.84	3,298.96	463.30	430.59
833.90	1,164.99	1,164.99	971.65	971.65		
			2,189.46	2,189.46	1,871.56	1,871.56
			739.50	739.50		
6,459.93	13,419.35	13,639.74				
196.39	2,109.32	466.05	24,375.94	24,758.12	15,401.79	15,452.73
262.36		26.96	881.46	1,239.51	929.26	652.84
			617.74	484.57	15.00	1,053.21
				1,198.33		3.84
6,918.68	15,528.67	14,132.75				
620.72	257.72	335.68	25,875.14	27,680.53	16,346.05	17,162.62
			3,831.89	8,567.14	8,567.14	6,281.51
7,539.40	15,786.39	14,468.43				
			29,706.03	27,680.53	24,913.19	23,444.13
6,588.15	13,770.82	13,557.63				
428.40	1,814.45	286.49	16,556.18	15,783.11	14,070.08	13,546.90
			6,246.03	2,136.49	7,802.19	5,998.13
7,016.55	15,585.27	13,844.12				
			22,802.21	17,919.60	21,872.27	19,545.03
111.00		210.00				
			3,541.00	3,952.05	1,611.00	1,946.00
110.00		210.00		1,198.33		
			3,541.00	5,150.38	1,611.00	1,946.00
411.85	201.12	414.31				
			3,363.82	4,136.89	1,429.92	1,953.10
				473.66		
411.85	201.12	414.31				
			3,363.82	4,610.55	1,429.92	1,953.10
7,539.40	15,786.39	14,468.43				
			29,707.03	27,680.53	24,913.19	23,444.13
101.4	100.0	97.9				
			88.0	67.7	134.2	133.8

STATEMENT

Comparative Balance Sheets of Electrical Departments

EUGENIA
SYSTEM—Continued

Municipality Population	Teeswater		Wingham	
	838		2,470	
	1921	1922	1921	1922
	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS				
Lands and buildings.....			9,000.00	8,603.45
Substation equipment.....	330.31	330.31	4,657.93	4,657.93
Distribution system, overhead....	13,719.15	13,929.37	28,393.31	28,973.78
Distribution system, underground.....				
Line transformers.....	2,394.57	2,771.05	10,498.45	11,117.92
Meters.....	1,538.04	1,694.67	6,944.58	7,323.05
Street light equipment, regular....	1,297.97	1,297.97	2,948.07	2,948.07
Street light equip., ornamental....				
Misc. construction expense.....	1,893.39	1,727.00	3,540.89	3,540.89
Steam or hydraulic plant.....			13,200.00	13,200.00
Old plant.....	5,361.36	5,000.36	15,392.64	15,288.58
Total plant.....	26,534.79	26,750.73	94,575.87	95,653.67
Bank and cash balance.....	1,779.44	743.97	5,244.81	4,287.57
Securities and investments.....				
Accounts receivable.....	236.49	278.10	2,331.35	1,504.74
Inventories.....			177.93	1,143.88
Sinking fund on local debentures....	1,560.01	2,122.16		
Equity in Hydro systems.....				
Other assets.....				25.35
Total assets.....	30,110.73	29,894.96	102,329.96	102,615.21
Deficit.....	2,524.62	1,235.83	2,728.48	
Total.....	32,635.35	31,130.79	105,058.44	102,615.21
LIABILITIES				
Debenture balance.....	27,433.36	27,433.36	74,727.57	72,039.24
Accounts payable.....	3,075.34	610.63	6,292.94	1,266.77
Bank overdraft.....				
Other liabilities.....				
Total liabilities.....	30,508.70	28,043.99	81,020.51	73,306.01
RESERVES				
For depreciation.....		398.00	2,660.00	4,272.00
For equity in H.E.P.C. system.....				
Total reserves.....		398.00	2,660.00	4,272.00
SURPLUS				
Debentures paid.....	566.64	566.64	21,377.93	24,066.26
Local sinking fund.....	1,560.01	2,122.16		
Additional operating surplus.....				970.94
Total surplus.....	2,126.65	2,688.80	21,377.93	25,037.20
Total liabilities, reserves & surplus	32,635.35	31,130.79	105,058.44	102,615.21
Per cent of net debt to total assets.	101.3	93.4	79.3	71.4

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

EUGENIA SYSTEM SUMMARY		WASDELLS SYSTEM					
		Beaverton 986		Brechin Police Vil.		Brock Township	
		1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
48,964.24	49,279.14	250.00	250.00				
27,529.48	29,977.37						
364,691.33	373,262.99	8,332.74	8,714.60	1,496.59	1,512.45		
93,878.28	99,917.70	2,221.28	2,413.39	936.80	936.80	1,742.56	1,742.56
88,490.95	94,924.02	2,679.42	3,010.33	371.77	412.57	795.70	795.70
32,045.51	32,452.15	501.09	501.09	69.89	69.89		
1,995.88	1,995.88						
39,019.70	39,495.34	2,085.67	2,163.77	266.26	337.06	61.74	61.74
46,482.00	46,482.00						
43,618.99	43,153.93	3,772.42	3,772.42				
786,716.36	810,940.52	19,842.62	20,825.60	3,141.31	3,268.77	2,600.00	2,600.00
19,699.59	32,398.26	2,602.61	1,385.04	446.80	747.13		
4,887.83	4,887.83						
21,342.56	52,193.17	559.30	2,277.29	152.38	247.65		
24,936.50	20,447.07	807.42	402.95	96.50			
108,348.09	117,441.88						
11,767.29	36,380.59	1,543.65	1,920.63	902.69	1,294.41		
217.40	157.40						
977,915.62	1,074,846.72	25,355.60	26,811.51	4,739.68	5,557.96	2,600.00	2,500.00
97,666.14	49,891.03			3,838.64	2,954.07		
1,075,581.76	1,124,737.75	25,355.60	26,811.51	8,578.32	8,512.03	2,600.00	2,600.00
579,819.57	615,888.08	13,162.73	12,840.35	1,571.19	2,787.08	2,446.75	2,363.75
171,458.91	94,340.34	4,751.99		5,282.63	3,491.56		
11,919.66	110.48						
7,672.53							
770,870.67	710,338.90	17,914.72	12,840.35	6,853.82	6,278.64	2,446.75	2,363.75
85,214.80	95,613.99	2,649.00	3,037.00	643.00	725.00		
11,767.29	36,380.59	1,543.65	1,920.63	902.69	1,294.41		
96,982.09	131,994.58	4,192.65	4,957.63	1,545.69	2,019.41		
65,998.58	81,740.27	1,837.27	2,159.65	178.81	213.98	153.25	236.25
108,348.09	117,441.88						
33,382.33	83,222.12	1,410.96	6,853.88				
207,729.00	282,404.27	3,248.23	9,013.53	178.81	213.98	153.25	236.25
1,075,581.76	1,124,737.75	25,355.60	26,811.51	8,578.32	8,512.03	2,600.00	2,600.00
78.8	68.5	70.8	51.6	144.6	147.5	94.2	90.1

STATEMENT

Comparative Balance Sheets of Electrical Departments

WASDELLS SYSTEM—Continued

Municipality	Cannington		Kirkfield Police Vil.		Port Perry
Population	951				1,162
	1921	1922	1921	1922	1922
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....					
Substation equipment.....					
Distribution system, overhead....	7,321.97	7,601.24	5,041.33	5,041.33	14,102.66
Distribution system, underground.....					
Line transformers.....	1,770.29	1,902.40	428.20	428.20	1,351.03
Meters.....	2,728.71	2,899.05	390.60	390.60	1,759.23
Street light equipment, regular....	563.03	563.03	368.29	368.29	410.31
Street light equip., ornamental.....					
Misc. construction expense.....	506.58	559.63	301.53	301.53	592.18
Steam or hydraulic plant.....					
Old plant.....	3,609.37	3,609.37			
Total plant.....	16,499.95	17,134.72	6,529.95	6,529.95	18,215.41
Bank and cash balance.....	756.77	443.34	303.87	9.49	530.80
Securities and investments.....					
Accounts receivable.....	457.26	465.59		22.90	225.25
Inventories.....	1,300.90	1,820.83		523.10	
Sinking fund on local debentures.....					
Equity in Hydro systems.....	1,120.46	1,672.85			
Other assets.....					
Total assets.....	20,135.34	21,537.33	6,833.82	7,085.44	18,971.46
Deficit.....	2,874.60		244.17	19.46	83.58
Total.....	23,009.94	21,537.33	7,077.99	7,104.90	19,055.04
LIABILITIES					
Debenture balance.....	13,444.74	13,129.87	5,826.90	5,664.01	
Accounts payable.....	3,985.48	358.81	828.99	730.90	19,055.04
Bank overdraft.....					
Other liabilities.....					
Total liabilities.....	17,430.22	13,488.68	6,655.89	6,394.91	19,055.04
RESERVES					
For depreciation.....	2,904.00	3,133.20	249.00	374.00	
For equity in H.E.P.C. system....	1,120.46	1,672.85			
Total reserves.....	4,024.46	4,806.05	249.00	374.00	
SURPLUS					
Debentures paid.....	1,555.26	1,870.13	173.10	335.99	
Local sinking fund.....					
Additional operating surplus.....		1,372.47			
Total surplus.....	1,555.26	3,242.60	173.10	335.99	
Total liabilities, reserves & surplus.....	23,009.94	21,537.33	7,077.99	7,104.90	19,055.04
Per cent of net debt to total assets.....	86.6	68.0	97.3	90.2	100.4

"A"—Continued

of Hydro Municipalities as at December 31, 1922

Sunderland Police Vil.		Uxbridge 1,492		Woodville 455		WASDELLS SYSTEM SUMMARY	
1921	1922	1922		1921	1922	1921	1922
\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.	\$ c.
						250.00	250.00
3,205.34	3,222.65	9,596.49		2,065.16	2,042.35	27,463.13	51,833.77
1,250.16	1,250.16	1,321.28		804.32	898.87	7,411.05	12,244.69
1,101.50	1,245.90	1,377.38		1,319.21	1,367.17	8,591.21	13,257.93
240.33	240.33	1,187.43		127.31	127.31	1,869.94	3,467.68
142.22	142.22	694.42		251.91	251.91	3,554.17	5,104.46
2,030.00	2,030.00			2,182.50	2,182.50	11,594.29	11,594.29
7,969.55	8,131.26	14,177.00		6,750.41	6,870.11	60,733.79	97,752.82
62.77	519.41	777.00			722.26	4,172.82	5,134.47
116.90	114.99	246.01		195.93	575.81	1,481.77	4,175.49
88.78						2,293.60	2,746.88
1,043.22	1,561.91			1,093.90	1,588.70	5,703.92	8,038.50
9,281.22	10,327.57	15,200.01		8,040.24	9,756.88	74,385.90	117,848.16
4,965.84	2,350.78			3,271.76	94.25	15,195.01	5,502.14
14,247.06	12,678.35	15,200.01		11,312.00	9,851.13	89,580.91	123,350.30
5,884.75	5,709.67			4,912.59	4,783.59	44,802.90	47,278.32
5,217.72	2,966.32	14,820.10		3,829.05	1,821.53	23,895.86	43,244.26
		338.05		68.15		68.15	338.05
11,102.47	8,675.99	15,158.15		8,809.79	6,605.12	68,766.91	90,860.63
1,186.12	1,350.12			820.90	940.90	8,452.02	9,560.22
1,043.22	1,561.91			1,093.90	1,588.70	5,703.92	8,038.50
2,229.34	2,912.03			1,914.80	2,529.60	14,155.94	17,598.72
915.25	1,090.33			587.41	716.41	5,247.10	6,622.74
		41.86				1,410.96	8,268.21
915.25	1,090.33	41.86		587.41	716.41	6,658.06	14,890.95
14,247.06	12,678.35	15,200.01		11,312.00	9,851.13	89,580.91	123,350.30
119.6	99.0	99.7		109.5	80.8	92.5	82.7

STATEMENT

Comparative Balance Sheets of Electrical Departments

MUSKOKA SYSTEM

Municipality Population	Gravenhurst 1,621		Huntsville 2,316	
	1921	1922	1921	1922
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....	12,258.29	12,258.29	326.49	326.49
Substation equipment.....	12,209.74	12,209.74	647.30	647.30
Distribution system, overhead...	26,851.15	27,630.86	10,665.91	10,960.78
Distribution system, underground				
Line transformers.....	1,518.59	1,703.32	2,955.20	2,955.20
Meters.....	4,719.18	4,913.73	5,079.26	5,403.88
Street light equipment, regular...	695.45	695.45	1,036.50	1,036.50
Street light equip., ornamental...				
Misc. construction expense.....	1,542.00	1,872.00	279.92	279.92
Steam or hydraulic plant.....				
Old plant.....	7,610.69	7,610.69	5,436.20	5,436.20
Total plant.....	67,405.09	68,894.08	26,426.78	27,046.27
Bank and cash balance.....	3,527.63	4,699.94	6,154.76	2,677.01
Securities and investments.....				
Accounts receivable.....	2,098.26	3,537.51	2,386.55	12,592.33
Inventories.....	2,568.27	2,770.07	2,448.62	3,167.32
Sinking fund on local debentures.	2,770.49	3,125.74		
Equity in Hydro systems.....	750.60	1,449.06		3,069.84
Other assets.....				
Total assets.....	79,120.34	84,476.40	37,416.71	48,552.77
Deficit.....	7,010.75	1,441.40		
Total.....	86,131.09	85,917.80	37,416.71	48,552.77
LIABILITIES				
Debenture balance.....	38,122.60	36,233.52	16,781.42	15,760.92
Accounts payable.....	6,689.56	5,463.46	8,978.66	6,252.74
Bank overdraft.....				
Other liabilities.....				
Total liabilities.....	44,812.16	41,696.98	25,760.08	22,013.66
RESERVES				
For depreciation.....	11,952.00	11,911.10	4,424.00	4,767.49
For equity in H.E.P.C. system...	750.60	1,449.06		3,069.84
Total reserves.....	12,702.60	13,360.16	4,424.00	7,837.33
SURPLUS				
Debentures paid.....	25,845.84	27,734.92	4,352.12	5,372.62
Local sinking fund.....	2,770.49	3,125.74		
Additional operating surplus.....			2,880.51	13,329.16
Total surplus.....	28,616.33	30,860.66	7,232.63	18,701.78
Total liabilities, reserves & surplus	86,131.09	85,917.80	37,416.71	48,552.77
Per cent of net debt to total assets.	56.7	50.3	68.8	48.4

"A"—Continued

of Hydro Municipalities as at December 31, 1922

MUSKOKA SYSTEM SUMMARY		ST. LAWRENCE SYSTEM					
		Alexandria		Apple Hill Police Vil.		Brockville	
		2,319				9,377	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
12,584.78	12,584.78	202.00	202.00	169.06	169.06	27,994.53	27,994.53
12,857.04	12,857.04						
37,517.06	38,591.64	19,351.72	19,565.25	2,703.68	2,703.68	60,140.61	60,724.78
4,473.79	4,658.52	5,459.76	6,202.23	1,165.70	1,165.70	19,659.27	20,916.53
9,798.44	10,317.61	4,139.67	4,523.87	476.49	615.81	24,311.12	25,955.08
1,731.95	1,731.95	1,988.99	1,988.99	398.97	398.97	14,655.61	14,792.33
1,821.92	2,151.92	5,318.02	5,367.72	133.73	133.73	5,686.59	5,561.59
13,046.89	13,046.89	4,734.89	4,531.89	709.55	709.55	53,445.98	53,445.98
93,831.87	95,940.35	41,195.05	42,381.95	5,757.18	5,896.50	205,893.71	209,390.82
9,682.39	7,376.95	2,614.67	1,754.77	43.45	291.26	200.00	200.00
4,484.81	16,129.84	579.38	972.82	300.41	398.97	25,562.67	49,855.05
5,016.89	5,937.39	1,290.70	1,122.11			2,774.62	704.71
2,770.49	3,125.74					50,349.30	57,324.67
750.60	4,518.90					4,970.18	10,221.57
							516.28
116,537.05	133,029.17	45,679.80	46,231.65	6,101.04	6,586.73	289,750.48	328,213.10
7,010.75	1,441.40	2,123.86	3,474.45	52.51	376.01	39,637.41	18,480.82
123,547.80	134,470.57	47,803.66	49,706.10	6,153.55	6,962.74	329,387.89	346,693.92
54,904.02	51,994.44	41,816.37	39,785.00	5,000.00	4,864.08	130,893.85	125,827.82
15,668.22	11,716.20	4,063.57	5,333.01	1,153.55	1,867.74	16,726.53	14,436.86
						53,794.88	58,274.82
70,572.24	63,710.64	45,879.94	45,118.01	6,153.55	6,731.82	201,415.26	198,539.50
16,376.00	16,678.59		633.00		95.00	9,547.00	12,436.00
750.60	4,518.90					4,970.18	10,221.57
17,126.60	21,197.49		633.00		95.00	14,517.18	22,657.57
30,197.96	33,107.54	1,923.72	3,955.09		135.92	63,106.15	68,172.18
2,770.49	3,125.74					50,349.30	57,324.67
2,880.51	13,329.16						
35,848.96	49,562.44	1,923.72	3,955.09		135.92	113,455.45	125,496.85
123,547.80	134,470.57	47,803.66	49,706.10	6,153.55	6,962.74	329,387.89	346,693.92
60.6	49.8	100.6	97.5	100.8	102.2	69.5	62.4

STATEMENT

Comparative Balance Sheets of Electrical Departments

**ST. LAWRENCE
SYSTEM—Continued**

Municipality Population	Chesterville 941		Lancaster 612		Martin- town P.V.
	1921	1922	1921	1922	1921
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....	250.00	250.00			126.15
Substation equipment.....					
Distribution system, overhead.....	6,164.82	6,187.91	5,963.47	5,967.15	2,400.72
Distribution system, underground.....					
Line transformers.....	1,930.73	1,930.73	1,064.35	1,064.35	766.16
Meters.....	2,273.19	2,521.84	844.05	978.95	475.07
Street light equipment, regular....	318.22	318.22	567.75	567.75	335.26
Street light equip., ornamental.....					
Misc. construction expense.....	610.68	610.68	1,053.60	1,053.60	653.27
Steam or hydraulic plant.....					
Old plant.....					
Total plant.....	11,547.64	11,819.38	9,493.22	9,631.80	4,756.63
Bank and cash balance.....		318.23	415.60	371.45	1,190.12
Securities and investments.....					
Accounts receivable.....	950.67	2,851.68		560.00	264.25
Inventories.....	2,290.52	3,419.30			
Sinking fund on local debentures.....					
Equity in Hydro systems.....	2,505.64	3,703.51			
Other assets.....					
Total assets.....	17,294.47	22,112.10	9,908.82	10,563.25	6,211.00
Deficit.....	3,678.52		1,526.23	3,316.86	84.91
Total.....	20,972.99	22,112.10	11,435.05	13,880.11	6,295.91
LIABILITIES					
Debenture balance.....	5,331.55	5,081.94	9,617.02	9,242.42	5,836.90
Accounts payable.....	8,237.66	6,372.26	1,464.63	3,738.69	295.91
Bank overdraft.....	825.69				
Other liabilities.....					
Total liabilities.....	14,394.90	11,454.20	11,081.65	12,981.11	6,132.81
RESERVES					
For depreciation.....	2,904.00	3,189.85		171.00	
For equity in H.E.P.C. system.....	2,505.64	3,703.51			
Total reserves.....	5,409.64	6,893.36		171.00	
SURPLUS					
Debentures paid.....	1,168.45	1,418.06	353.40	728.00	163.10
Local sinking fund.....					
Additional operating surplus.....		2,346.48			
Total surplus.....	1,168.45	3,764.54	353.40	728.00	163.10
Total liabilities, reserves & surplus.....	20,972.99	22,112.10	11,435.05	13,880.11	6,295.91
Per cent of net debt to total assets.....	83.3	62.3	112.2	122.8	98.8

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

Martin- town P.V.	Maxville		Prescott		Williamsburg Police Vil.	
	785		2,723			
	1922	1921	1922	1921	1921	1922
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
126.15			2,761.54	2,761.54		
2,400.72	407.79	407.79	27,160.31	27,796.85	1,597.74	1,597.74
690.33	10,142.31	10,305.19				
475.07			6,938.98	7,080.48	297.89	297.89
335.26	1,732.20	1,732.20	9,325.39	9,550.80	650.47	650.47
653.27	1,388.10	1,681.42	1,490.28	1,546.12	74.41	74.41
	1,270.70	1,284.30				
	2,347.27	2,357.66	1,340.70	1,352.20	4.00	4.00
			12,108.35	12,108.35		
4,680.80			61,125.55	62,196.34	2,624.51	2,624.51
192.92	17,288.37	17,768.56	3,389.41	3,725.17	1,234.76	1,182.39
1,000.00			6,758.51	12,978.67	27.06	67.28
165.97	51.59	135.25	2,128.31	2,583.37		
			1,916.21	2,845.56	81.49	186.18
			.15			
6,039.69	17,339.96	17,903.81	75,318.14	84,329.11	3,967.82	4,060.36
38.31	1,918.96	2,352.71			448.53	
6,078.00	19,258.92	20,256.52	75,318.14	84,329.11	4,416.35	4,060.36
5,664.01			17,996.88	17,128.63	2,072.79	1,955.75
	15,541.13	15,057.02	3,581.68	2,836.37	939.86	
	2,143.61	2,572.39				
	1,115.31	1,382.13				
5,664.01	18,800.05	19,011.54	21,578.56	19,965.00	3,012.65	1,955.75
78.00		302.00	15,492.00	17,081.00	645.00	723.00
			1,916.21	2,845.56	81.49	186.18
78.00		302.00	17,408.21	19,926.56	726.49	909.18
335.99	458.87	942.98	5,982.46	6,850.71	677.21	794.25
			2,128.31	2,583.37		
			28,220.60	35,003.47		401.18
335.99	458.87	942.98	36,331.37	44,437.55	677.21	1,195.43
6,078.00	19,258.92	20,256.52	75,318.14	84,329.11	4,416.35	4,060.36
93.7	108.7	106.1	28.6	24.6	76.0	50.5

STATEMENT

Comparative Balance Sheets of Electrical Departments

ST. LAWRENCE
SYSTEM—Continued

Municipality Population	Winchester 1,058		ST. LAWRENCE SYSTEM SUMMARY	
	1921	1922	1921	1922
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....	224.15	224.15	31,727.43	31,727.43
Substation equipment.....			407.79	407.79
Distribution system, overhead....	7,478.59	7,552.72	143,103.97	144,801.99
Distribution system, underground.....				
Line transformers.....	989.01	989.01	40,004.05	42,069.45
Meters.....	2,400.74	2,616.27	46,284.29	49,569.58
Street light equipment, regular....	564.98	564.98	21,665.17	21,871.33
Street light equip., ornamental.....				
Misc. construction expense.....	343.94	343.94	17,491.80	17,438.39
Steam or hydraulic plant.....				
Old plant.....	1,100.00	1,100.00	72,098.77	71,895.77
Total plant.....	13,101.41	13,391.07	372,783.27	379,781.73
Bank and cash balance.....		1,544.18	9,088.81	9,580.37
Securities and investments.....				1,000.00
Accounts receivable.....	2,229.74	6,773.18	36,724.28	74,758.88
Inventories.....	3,338.46	3,704.23	9,694.30	8,950.35
Sinking fund on local debentures.....			52,477.61	59,908.04
Equity in Hydro systems.....	1,167.76	1,747.92	10,641.28	18,704.74
Other assets.....			.15	516.28
Total assets.....	19,837.37	27,160.55	491,408.90	553,200.39
Deficit.....			49,470.93	28,039.16
Total.....	19,837.37	27,160.55	540,879.83	581,239.55
LIABILITIES				
Debenture balance.....	9,520.24	9,318.54	243,626.73	233,925.21
Accounts payable.....	1,405.67	3,568.00	40,012.67	40,725.32
Bank overdraft.....	804.18		56,540.06	59,656.95
Other liabilities.....				
Total liabilities.....	11,730.09	12,886.54	340,179.46	334,307.48
RESERVES				
For depreciation.....	3,579.33	3,561.82	32,167.33	38,270.67
For equity in H.E.P.C. system....	1,167.76	1,747.92	10,641.28	18,704.74
Total reserves.....	4,747.09	5,309.74	42,808.61	56,975.41
SURPLUS				
Debentures paid.....	1,129.76	1,331.46	74,963.12	84,664.64
Local sinking fund.....			52,477.61	59,908.04
Additional operating surplus.....	2,230.43	7,632.85	30,451.03	45,383.98
Total surplus.....	3,360.19	8,964.31	157,891.76	189,956.66
Total liabilities, reserves & surplus	19,837.37	27,160.59	540,879.83	581,239.55
Per cent of net debt to total assets.	58.7	50.7	69.3	62.6

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

RIDEAU SYSTEM						
Carleton Place		Kemptville	Lanark		Perth	
4,123		1,220	575		3,710	
1921	1922	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
5,688.32	5,688.32				6,600.50	6,600.50
2,471.63	2,471.63				3,492.82	3,492.82
26,387.48	27,199.09	15,534.12	4,578.52	4,754.70	31,271.22	32,197.43
9,488.95	9,501.27	2,799.14	555.01	555.01	13,733.26	14,564.31
10,463.95	11,024.78	2,943.84	797.58	924.27	13,442.33	14,678.48
683.31	715.65	907.68	633.84	633.84	2,145.21	2,383.07
8,582.10	7,934.70	3,157.27	260.38	260.38	4,659.56	4,686.51
					25,845.26	23,395.26
					2,674.25	2,674.25
63,765.74	64,535.44	25,342.05	6,825.33	7,128.20	103,864.41	104,672.63
678.53	4,919.88	2,605.65	2,086.23	305.42	10,580.60	15,250.32
1,298.78	11,710.75	4,029.22	228.36	1,558.21	7,440.97	12,362.87
4,877.89	4,110.07	625.10			10,685.72	10,761.08
		102.60				
70,620.94	85,276.14	32,704.62	9,139.92	8,991.83	132,571.70	143,046.90
922.74						
71,543.68	85,276.14	32,704.62	9,139.92	8,991.83	132,571.70	143,046.90
38,389.25	63,786.65	24,348.59	7,561.47	7,316.81	105,688.61	104,154.77
25,686.68	3,815.81	1,816.22	1,487.30		7,919.56	3,261.26
64,075.93	67,602.46	26,164.81	9,048.77	7,316.81	113,608.17	107,416.03
5,857.00	6,963.83	444.00		135.00	9,462.00	11,178.00
5,857.00	6,963.83	444.00		135.00	9,462.00	11,178.00
1,610.75	2,213.35	651.41		244.66	2,711.39	4,245.23
	8,496.50	5,444.40	91.15	1,295.36	6,790.14	20,207.64
1,610.75	10,709.85	6,095.81	91.15	1,540.02	9,501.53	24,452.87
71,543.68	85,276.14	32,704.62	9,139.92	8,991.83	132,571.70	143,046.90
94.9	79.2	80.0	99.1	81.3	85.7	75.9

STATEMENT

Comparative Balance Sheets of Electrical Departments

RIDEAU
SYSTEM—Continued

Municipality Population	Smiths Falls 6,529		RIDEAU SYSTEM SUMMARY	
	1921	1922	1921	1922
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....	20,688.10	20,588.10	32,976.92	32,876.92
Substation equipment.....	4,836.17	4,845.66	10,800.62	10,810.11
Distribution system, overhead....	64,753.49	65,211.70	126,990.71	144,897.04
Distribution system, underground				
Line transformers.....	13,990.74	14,809.63	37,767.96	42,229.36
Meters.....	20,631.06	21,627.18	45,334.92	51,198.55
Street light equipment, regular...	1,801.89	1,801.89	5,264.25	6,442.13
Street light equip., ornamental....				
Misc. construction expense.....	7,903.05	7,962.50	21,405.09	24,001.36
Steam or hydraulic plant.....	38,251.49	38,251.49	64,096.75	61,646.75
Old plant.....	21,508.20	21,473.20	24,182.45	24,147.45
Total plant.....	194,364.19	196,571.35	368,819.67	398,249.67
Bank and cash balance.....	4,046.70	3,120.78	17,392.06	26,202.05
Securities and investments.....				
Accounts receivable.....	5,448.49	14,230.97	14,416.60	43,892.02
Inventories.....	10,494.33	3,869.27	26,057.94	19,365.52
Sinking fund on local debentures.				
Equity in Hydro systems.....				
Other assets.....				102.60
Total assets.....	214,353.71	217,792.37	426,686.27	487,811.86
Deficit.....	24,284.18	13,070.23	25,206.92	13,070.23
Total.....	238,637.89	230,862.60	451,893.19	500,882.09
LIABILITIES				
Debenture balance.....	165,797.97	172,558.23	317,437.30	372,165.05
Accounts payable.....	24,362.29	10,000.00	59,455.83	18,893.29
Bank overdraft.....	10,000.00		10,000.00	
Other liabilities.....				
Total liabilities.....	200,160.26	182,558.23	386,893.13	391,058.34
RESERVES				
For depreciation.....	19,550.60	23,237.60	34,869.60	41,958.43
For equity in H.E.P.C. system....				
Total reserves.....	19,550.60	23,237.60	34,869.60	41,958.43
SURPLUS				
Debentures paid.....	18,927.03	25,066.77	23,249.17	32,421.42
Local sinking fund.....				
Additional operating surplus.....			6,881.29	35,443.90
Total surplus.....	18,927.03	25,066.77	30,130.46	67,865.32
Total liabilities, reserves & surplus	238,637.89	230,862.60	451,893.19	500,882.09
Per cent of net debt to total assets.	93.5	83.8	90.7	80.1

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

THUNDER BAY SYSTEM		OTTAWA SYSTEM		TRENT SYSTEM	
Port Arthur		Ottawa		Bloomfield	
15,629		112,899		512	
1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
34,553.94	34,528.94	164,520.01	197,516.37		
3,021.38	3,021.38	162,551.81	178,836.46		
247,721.12	250,117.65	419,524.36	457,537.38	6,394.46	6,913.85
		92,237.62	183,576.86		
23,868.11	27,310.53	162,259.06	179,006.07	1,119.31	1,119.31
51,951.00	54,415.04	152,461.52	167,691.88	1,276.91	1,548.74
29,284.75	29,284.75	60,963.86	62,599.15	556.88	606.43
		29,975.55	29,978.05		
11,728.98	11,682.48	33,814.85	33,214.87	1,403.42	1,403.42
348,096.93	348,096.93				
750,226.21	758,457.70	1,278,308.64	1,489,957.09	10,750.98	11,591.75
18,136.21	77,894.03	1,952.25	93,768.40	1,002.40	1,255.21
46,315.33	72,599.60	50,000.00			
78,065.76	48,734.43	41,001.81	48,306.85	23.20	15.72
32,954.34	20,455.40	31,001.74	32,341.17	20.00	
129,166.19	121,402.02	231,508.95	257,737.79		
21,264.86	22,115.45				
827.50	910.73				
1,076,956.40	1,122,569.36	1,633,773.39	1,922,111.30	11,796.58	12,862.68
				1,332.84	844.24
1,076,956.40	1,122,569.36	1,633,773.39	1,922,111.30	13,129.42	13,706.92
460,447.06	444,332.60	700,000.00	980,000.00	10,790.86	10,578.13
26,286.04	84,901.14	44,613.33	80,357.46	1,176.42	1,528.92
		128,410.67			
13,518.39		10,801.50	13,801.55		
500,251.49	529,233.74	883,825.50	1,074,159.01	11,967.28	12,107.05
62,342.55	76,998.56	403,684.87	426,480.72	753.00	978.00
21,264.86	22,115.45				
83,607.41	99,114.01	403,684.87	426,480.72	753.00	978.00
165,652.94	181,767.40			409.14	621.87
129,166.19	121,402.02	231,508.95	257,737.79		
198,278.37	191,052.19	114,754.07	163,733.78		
493,097.50	494,221.61	346,263.02	421,471.57	409.14	621.87
1,076,956.40	1,122,569.36	1,633,773.39	1,922,111.30	13,129.42	13,706.92
46.4	48.1	54.1	55.8	101.2	94.0

STATEMENT

Comparative Balance Sheets of Electrical Departments

TRENT SYSTEM—Continued

Municipality	Havelock		Kingston		Lakefield
Population	1,258		22,234		1,193
	1921	1922	1921	1922	1921
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
ASSETS					
Lands and buildings.....			38,277.09	40,840.28	
Substation equipment.....	572.90	572.90			
Distribution system, overhead....	17,375.82	17,885.65	105,958.85	106,542.67	16,611.30
Distribution system, underground			44,747.10	49,363.34	
Line transformers.....	1,634.40	1,880.36	31,600.65	33,522.36	1,879.61
Meters.....	3,998.04	4,277.65	59,722.55	64,782.23	3,503.40
Street light equipment, regular...	1,753.49	1,801.28	17,001.27	17,446.50	1,367.95
Street light equip., ornamental...			22,669.64	22,669.64	
Misc. construction expense.....	4,226.31	4,251.31	42,527.08	41,911.33	3,232.55
Steam or hydraulic plant.....			76,653.59	76,121.34	
Old plant.....	2,515.45	2,465.45	25,048.11	25,598.11	3,744.25
Total plant.....	32,076.41	33,134.60	464,205.93	478,797.80	30,339.06
Bank and cash balance.....	119.14	186.66	22,722.16	45,021.32	2,013.37
Securities and investments.....					
Accounts receivable.....	287.41	366.81	10,696.40	12,213.82	3,312.40
Inventories.....		.99	10,675.74	12,584.80	40.95
Sinking fund on local debentures.			37,753.05	43,259.70	
Equity in Hydro systems.....					
Other assets.....					
Total assets.....	32,482.96	33,689.06	546,053.28	591,877.44	35,705.78
Deficit.....					
Total.....	32,482.96	33,689.06	546,053.28	591,877.44	35,705.78
LIABILITIES					
Debenture balance.....	28,114.37	27,281.60	268,276.10	263,218.18	33,112.16
Accounts payable.....	3,270.48	3,659.32			1,217.09
Bank overdraft.....					
Other liabilities.....					
Total liabilities.....	31,384.85	30,940.92	268,276.10	263,218.18	34,329.25
RESERVES					
For depreciation.....		528.00	24,731.67	23,229.32	901.00
For equity in H.E.P.C. system....					
Total reserves.....		528.00	24,731.67	23,229.32	901.00
SURPLUS					
Debentures paid.....	785.63	1,618.40	43,623.89	48,681.81	387.84
Local sinking fund.....			37,753.05	43,259.70	
Additional operating surplus.....	312.48	601.74	171,668.57	213,488.43	87.69
Total surplus.....	1,098.11	2,220.14	253,045.51	305,429.94	475.53
Total liabilities, reserves & surplus	32,482.96	33,689.06	546,053.28	591,877.44	35,705.78
Per cent of net debt to total assets.	96.5	91.8	49.1	44.4	96.0

"A"—Continued

of Hydro Municipalities as at December 31, 1921

Lakefield	Marmora		Norwood		Omamee	
	792		748		485	
1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
86.89			457.53	457.53	360.32	360.32
17,451.46	11,281.96	11,288.96	22,067.33	22,303.50	8,722.92	8,948.30
2,100.36	1,046.83	1,461.98	2,701.60	3,452.64	2,347.49	2,347.49
4,102.52	2,070.15	2,141.15	2,814.93	3,676.16	1,555.13	1,679.16
1,412.58	891.95	891.95	1,802.02	1,802.02	368.17	393.25
3,304.42	1,600.91	2,000.91	3,187.42	3,632.31	1,426.74	1,426.74
3,445.25	763.77	579.02	1,443.21	2,447.51		
31,903.48	17,655.57	18,363.97	34,474.04	37,771.67	14,780.77	15,155.26
817.23		1,878.81	735.76	235.86	156.37	766.04
4,729.58	2,843.42	1,038.52	633.45		564.09	
40.95						
37,491.24	20,498.99	21,281.30	35,843.25	38,007.53	15,501.23	15,921.30
37,491.24	20,498.99	21,281.30	35,843.25	38,007.53	15,501.23	15,921.30
32,699.11	17,092.20	16,483.62	32,681.32	32,237.52	10,761.63	10,361.10
566.06	67.72	462.40	835.23	1,378.12	1,967.63	
	1,195.94		105.00	787.58		
33,265.17	18,355.86	16,946.02	33,621.55	34,403.22	12,729.26	10,361.10
1,421.00		167.15		634.00	1,404.00	1,734.00
1,421.00		167.15		634.00	1,404.00	1,734.00
800.89	573.91	1,182.49	418.68	862.48	1,238.37	1,638.90
2,004.18	1,569.22	2,985.64	1,803.02	2,107.83	129.60	2,187.30
2,805.07	2,143.13	4,168.13	2,221.70	2,970.31	1,367.97	3,826.20
37,491.24	20,498.99	21,281.30	35,843.25	38,007.53	15,501.23	15,921.30
88.1	89.4	88.1	98.2	93.8	82.0	65.0

STATEMENT

Comparative Balance Sheets of Electrical Departments

TRENT SYSTEM—Continued

Municipality Population	Peterboro 21,439		Picton 3,263	
	1921	1922	1921	1922
ASSETS	\$	c.	\$	c.
Lands and buildings.....	8,899.33	8,899.33	1,405.07	1,405.07
Substation equipment.....	9,045.24	9,209.85	989.69	989.69
Distribution system, overhead....	109,428.36	118,040.43	13,897.21	19,671.45
Distribution system, underground				
Line transformers.....	58,734.81	67,083.01	4,000.61	4,432.83
Meters.....	54,878.05	58,866.08	6,761.15	8,051.88
Street light equipment, regular...	3,613.80	3,537.30	1,162.90	1,247.90
Street light equip., ornamental...	26,107.68	26,107.68		
Misc. construction expense.....	58,153.88	57,391.38	2,738.50	2,907.43
Steam or hydraulic plant.....				
Old plant.....	17,435.71	17,435.71	3,739.98	3,739.98
Total plant.....	346,196.86	366,570.77	34,695.11	42,446.23
Bank and cash balance.....		4,316.59	2,886.46	1,092.82
Securities and investments.....			5,000.00	10,000.00
Accounts receivable.....	18,203.54	15,671.61	11,941.92	16,682.99
Inventories.....	12,953.23	11,819.64	3,599.16	3,995.24
Sinking fund on local debentures.	29,793.37	36,586.82		
Equity in Hydro systems.....				
Other assets.....				
Total assets.....	407,147.00	434,965.43	58,122.65	74,217.28
Deficit.....				
Total.....	407,147.00	434,965.43	58,122.65	74,217.28
LIABILITIES				
Debenture balance.....	220,000.00	270,000.00	3,732.51	3,412.99
Accounts payable.....	9,807.23	17,323.68	75.59	
Bank overdraft.....	50,523.47			
Other liabilities.....	7,097.13	8,719.96		
Total liabilities.....	287,427.83	296,043.64	3,807.10	3,412.99
RESERVES				
For depreciation.....	44,467.51	40,253.56		2,290.39
For equity in H.E.P.C. system....				
Total reserves.....	44,467.51	40,253.56		2,290.39
SURPLUS				
Debentures paid.....			1,997.81	2,317.33
Local sinking fund.....	29,793.37	36,586.82		
Additional operating surplus.....	45,458.29	62,081.41	52,317.74	66,196.57
Total surplus.....	75,251.66	98,668.23	54,315.55	68,513.90
Total liabilities, reserves & surplus	407,147.00	434,965.43	58,122.65	74,217.28
Per cent of net debt to total assets.	70.6	68.0	6.5	4.5

“ A ”—Continued

of Hydro Municipalities as at December 31, 1922

Wellington 840		East Whitby Township		West Whitby Township	
1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
200.00	200.00				
10,251.97	10,733.06	704.50	704.50	9,207.42	9,207.42
2,424.44	2,685.02	2,459.31	2,459.31	2,329.96	2,329.96
2,318.50	2,707.82	787.22	787.22	1,207.75	1,207.75
796.02	796.02			721.76	721.76
717.28	717.28	48.97	48.97	33.11	33.11
2,477.92	2,477.92				
19,186.13	20,317.12	4,000.00	4,000.00	13,500.00	13,500.00
15.18	378.68				
136.99	140.71				
19,338.30	20,836.51	4,000.00	4,000.00	13,500.00	13,500.00
1,150.23					
20,488.53	20,836.51	4,000.00	4,000.00	13,500.00	13,500.00
16,629.59	16,409.44	3,653.76	3,524.22	12,331.65	11,894.55
1,773.75	982.80				
544.78	897.17				
18,948.12	18,289.41	3,653.76	3,524.22	12,331.65	11,894.55
1,170.00	1,544.00				
1,170.00	1,544.00				
370.41	590.56	346.24	475.78	1,168.35	1,605.45
	412.54				
370.41	1,003.10	346.24	475.78	1,168.35	1,605.45
20,488.53	20,836.51	4,000.00	4,000.00	13,500.00	13,500.00
97.9	87.7	91.3	88.1	91.2	88.1

STATEMENT "A"—Concluded

Comparative Balance Sheets of Electrical Departments of Hydro Municipalities as at December 31, 1922

TRENT SYSTEM—Continued		ALL SYSTEMS			
Municipality Population	TRENT SYSTEM SUMMARY		GRAND SUMMARY		
	1921	1922	1921	1922	
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.	
Lands and buildings.....	48,781.49	51,431.57	3,230,985.63	3,334,522.68	
Substation equipment.....	11,425.68	11,590.29	5,403,689.90	5,046,857.98	
Distribution system, overhead....	321,990.18	349,691.25	8,397,361.48	11,165,330.24	
Distribution system, underground	44,747.10	49,363.34	1,401,135.97	1,598,053.02	
Line transformers.....	107,489.75	124,874.63	3,077,649.83	3,618,684.73	
Meters.....	138,898.81	153,828.36	3,552,076.79	4,033,689.52	
Street light equipment, regular...	29,214.45	30,656.99	1,335,997.13	1,419,016.05	
Street light equip., ornamental...	48,777.32	48,777.32	610,586.70	666,084.50	
Misc. construction expense.....	119,214.09	119,028.61	3,030,134.16	3,261,495.74	
Steam or hydraulic plant.....	76,653.59	76,121.34	704,848.46	565,158.54	
Old plant.....	57,168.40	58,188.95	912,388.55	7,997,947.87	
Total plant.....	1,004,360.86	1,073,552.65	31,656,854.60	42,706,840.87	
Bank and cash balance.....	29,635.66	55,570.54	900,842.34	1,164,336.24	
Securities and investments.....	5,000.00	10,000.00	477,678.69	443,938.18	
Accounts receivable.....	48,521.01	51,097.73	2,155,788.62	3,874,317.14	
Inventories.....	27,426.07	28,582.33	1,604,596.28	1,738,795.96	
Sinking fund on local debentures.	67,546.42	79,846.52	2,541,718.35	3,416,231.45	
Equity in Hydro systems.....			795,570.51	1,543,434.12	
Other assets.....			78,929.84	238,940.13	
Total assets.....	1,182,490.02	1,298,649.77	40,111,979.23	55,126,834.09	
Deficit.....	2,483.07	844.24	258,486.41	147,868.55	
Total.....	1,184,973.09	1,299,494.01	40,370,465.64	55,274,702.64	
LIABILITIES					
Debenture balance.....	641,190.74	698,100.46	21,619,220.99	30,454,186.12	
Accounts payable.....	20,190.14	25,901.30	1,887,567.93	3,699,292.52	
Bank overdraft.....	52,264.19	897.17	989,099.98	456,706.69	
Other liabilities.....	7,202.13	9,507.54	938,368.84	586,203.02	
Total liabilities.....	720,847.20	734,406.47	25,434,257.74	35,196,388.35	
RESERVES					
For depreciation.....	73,427.18	72,779.42	5,491,858.93	6,512,813.92	
For equity in H.E.P.C. system.....			800,249.05	1,543,434.12	
Total reserves.....	73,427.18	72,779.42	6,292,107.98	8,056,248.04	
SURPLUS					
Debentures paid.....	49,805.68	60,395.96	1,860,079.53	3,104,591.15	
Local sinking fund.....	67,546.42	79,846.52	2,541,718.35	3,416,231.45	
Additional operating surplus.....	273,346.61	352,065.64	4,242,302.04	5,501,243.65	
Total surplus.....	390,698.71	492,308.12	8,644,099.92	12,022,066.25	
Total liabilities, reserves & surplus	1,184,973.09	1,299,494.01	40,370,465.64	55,274,702.64	
Per cent of net debt to total assets.	61.0	56.5	64.7	65.6	

HYDRO-ELECTRIC POWER COMMISSION
BALANCE SHEETS

OF THE MUNICIPALITIES OF THE
NIAGARA, SEVERN, EUGENIA, WASDELLS, MUSKOKA,
ST. LAWRENCE AND RIDEAU SYSTEMS

DECEMBER 31, 1922

being

Financial Statements Combining the Hydro-Electric Power Commission's
Plant and Reserves with the Assets, Liabilities and Reserves
of the 'Hydro' Municipal Utilities

HYDRO-ELECTRIC POWER COMMISSION BALANCE SHEET OF THE MUNICIPALITIES OF THE NIAGARA SYSTEM, DECEMBER 31, 1922

The Commission submits herewith a statement of the Niagara system's assets, liabilities, reserves and surpluses reflecting the operations of the Hydro-Electric Power Commission of Ontario and the municipalities since the commencement of operation to December 31, 1922.

Explanation of the Various Columns of the Balance Sheet

Column 1—Gives the names of the municipalities now under contract with the Hydro-Electric Power Commission of Ontario for a supply of electrical energy generated at Niagara Falls, and the dates upon which each municipality commenced to receive this supply of power.

Column 2—Gives the average electrical horsepower delivered to each municipality by the Hydro-Electric Power Commission of Ontario during the year.

ASSETS

Column 3—Shows the cost of the plant of the Hydro-Electric Power Commission of Ontario as annually adjusted and apportioned to each municipality having a contract with the Commission and receiving power from the system during the year. The whole plant is owned and operated by the Commission. It comprises the generating equipment—including the Ontario Power Company's plant at Niagara Falls purchased by the Commission in 1917—also the transformer stations and transmission lines necessary to transform the power and transmit it to the municipalities supplied from the Niagara system. This plant is administered, operated and maintained by the Hydro-Electric Power Commission for the contracting municipalities by means of revenue derived from the sale, on the basis of COST, of electrical energy to the municipalities and to sundry other customers.

Column 4—Gives the cost of plants within the boundaries of the respective municipalities. These plants are financed, operated and maintained by the municipalities from the revenue derived from the utilities' customers.

Column 5—Shows the bank balance and investment of surplus funds in Government and other authorized securities and investments made by each municipal Hydro-electric utility.

Column 6—Gives sinking funds, in respect of local plant on deposit with municipal treasurers; sinking funds in respect of Commission's plant on deposit with Commission and invested in provincial securities, also municipal accounts receivable and inventories, together with the sum of \$2,475,421.02 on deposit with the Hydro-Electric Power Commission of Ontario for the purpose of renewing its stations and lines.

NOTE.—Among other charges, the cost of power to the Commission as charged to municipalities includes an annual levy (after the five-year exemption period according to the Power Commission Act) for sinking fund for the specific purpose of liquidating the Commission's debt to the Provincial Government, and also includes a renewals reserve fund for the replacement of transforming and transmitting equipment. These accumulations represent a municipal equity in present and future plants and therefore the sum of both these funds is reflected as an asset.

Column 7—Totals columns 3, 4, 5 and 6 and shows the total investment of each municipality in the Niagara system.

LIABILITIES

Column 8—Gives the municipalities' liability in respect to the Hydro-Electric Power Commission's plants. The total of this column represents the sum invested by the Commission in stations, lines and generating plants, (see column 3) which sum is being repaid by the contracting municipalities by deposits to the Commission's sinking fund collected in the cost of power. These sinking funds, in accordance with the Power Commission Act, are invested in provincial securities.

Column 9—Shows the municipal debenture debt in respect of Hydro municipal plants within the municipal boundaries. This debt is created by the issuance of municipal serial or sinking fund debentures, which, in the majority of cases, are redeemable in twenty years.

Column 10—Gives the municipal accounts payable and other liabilities of the municipalities, also the current liability respecting the Ontario Power Company's generating plant at Niagara Falls.

Column 11—Gives the total debt of each municipality in respect of local plants, the Commission's stations and lines, and also of the Ontario Power Company of Niagara Falls.

RESERVES

Column 12—Shows the reserves arising from sinking fund payments and municipal debenture retirals in respect of local plants and the Hydro Commission's stations and lines.

NOTE.—The cost of power to the Commission as charged to municipalities includes, amongst other charges, an annual levy (after the five-year exemption period provided for in the Power Commission Act) for sinking fund for the purpose of liquidating the Hydro-Electric Power Commission's debt to the Provincial Government. The total of the sums so paid in accordance with provisions of the Act, are invested in provincial securities, and amount to \$1,780,533.43.

Column 13—Shows reserve fund provided by the municipalities for renewing local plants and Commission's stations and lines (see column 6). It also includes the sum of \$1,387,736.85 being the reserve for the purpose of renewing the development plant of the Ontario Power Company of Niagara Falls.

NOTE.—The cost of power to the Commission as charged to municipalities includes, amongst other charges, an annual levy in respect of a renewals fund for the specific purpose of replacing development plants, transforming and transmitting equipment.

SURPLUS

Column 14—Shows the sum which municipal Hydro utilities of the Niagara system have accumulated after having met, or having made provision to meet, every expense on account of interest, operation and maintenance, and after meeting all debenture payments, sinking fund, renewal and contingency charges both for local systems and for the provincial Hydro properties at present in operation.

Column 15—Totals reserves and surpluses as given in Columns 12, 13 and 14.

STATEMENT COMBINING THE HYDRO-ELECTRIC POWER COMMISSION'S OF THE HYDRO MUNICIPAL UTILITIES,

ASSETS

Municipality	Date commenced operation	Average electrical horsepower taken during the year 1922	Proportionate share of Hydro-Electric Power Commission's plant to serve municipalities as ascertained by annual adjustment	Plant value within the boundaries of the municipalities	Bank balances and investments in securities (municipalities only)	Accounts receivable, inventories and other assets	Total assets or municipalities' investment in Niagara system
NIAGARA							
Acton.....	Jan., 1913	249.1	\$ c. 36,641.23	\$ c. 28,953.69	\$ c. 2,922.18	\$ c. 12,126.55	\$ c. 80,643.65
Ailsa Craig.....	Jan., 1916	124.4	37,377.93	11,134.61	5,640.85	6,149.20	60,302.59
Alvinston.....	April, 1922	25.9	31,099.14	22,206.71	1,878.61	323.27	55,507.73
Aylmer.....	Mar., 1918	199.6	54,655.55	43,637.51	9,615.29	8,077.95	115,986.30
Ayr.....	Jan., 1915	79.9	16,664.90	15,470.75	1,886.07	5,456.25	39,477.97
Baden.....	May, 1912	210.4	28,038.14	9,055.65	6,315.96	10,455.34	53,865.09
Beachville.....	Aug., 1912	271.1	31,680.56	11,817.43	10,743.66	11,205.07	65,446.72
Blenheim.....	Nov., 1915	176.9	38,988.04	29,252.29	.....	9,982.08	78,222.41
Bolton.....	Feb., 1915	114.1	40,473.99	21,031.52	.....	10,341.72	71,847.23
Bothwell.....	Sept., 1915	136.5	33,282.72	7,972.57	4,597.12	11,265.68	57,118.09
Brampton.....	Nov., 1911	997.8	102,723.76	100,968.07	38,484.10	30,940.46	273,116.39
Brantford.....	Feb., 1914	5,152.6	330,713.15	551,347.20	7,971.72	144,900.70	1,034,932.77
Brigden.....	Jan., 1918	55.6	28,448.61	10,573.84	683.66	4,617.42	44,323.53
Burford.....	June, 1915	52.1	26,054.44	9,847.55	580.58	4,695.62	41,178.19
Burgessville.....	Nov., 1916	25.3	7,044.95	3,974.98	1,171.28	1,043.68	13,234.89
Caledonia.....	Oct., 1912	101.1	8,596.55	12,057.36	1,171.73	2,435.54	24,261.18
Chatham.....	Feb., 1915	2,742.9	297,627.44	400,187.23	50.00	125,488.66	823,353.33
Chippawa.....	Sept., 1919	81.0	.....	17,738.55	169.96	1,180.16	19,088.67
Clinton.....	Mar., 1914	174.8	43,720.45	48,008.62	3,713.50	23,187.30	118,630.37
Comber.....	May, 1915	104.7	29,223.71	9,075.34	.....	5,811.60	44,810.65
Dashwood.....	Sept., 1917	47.2	20,783.97	4,237.09	1.40	2,858.57	27,881.03
Delaware.....	Mar., 1915	13.1	4,673.66	3,302.10	615.11	2,884.70	11,475.57
Dereham Township.....	Sept., 1919	57.4	10,347.66	24,557.21	1,523.58	3,972.25	40,400.70
Dorchester.....	Dec., 1914	23.9	4,354.97	8,431.78	1,505.54	1,892.18	16,184.47
Drayton.....	Mar., 1918	51.3	26,643.07	10,631.93	3,482.53	3,637.52	44,395.05
Dresden.....	April, 1915	160.5	25,274.24	25,481.99	4,015.94	8,480.02	63,252.19
Drumbo.....	Dec., 1914	26.5	5,561.28	4,868.46	863.79	2,588.94	13,882.47
Dublin.....	Oct., 1917	28.1	10,235.89	6,516.98	130.86	985.00	17,868.73
Dundas.....	Jan., 1911	1,173.8	55,004.14	101,307.48	5,101.36	25,737.85	187,150.83
Dunnville.....	June, 1918	296.3	82,816.04	85,271.27	.....	12,153.67	180,240.98
Dutton.....	Sept., 1915	109.7	18,405.16	12,271.38	4,547.38	4,779.52	40,003.44
Elmira.....	Nov., 1913	417.5	56,931.42	40,587.08	1,100.68	15,943.39	114,562.57
Elora.....	Nov., 1914	244.1	42,935.43	23,114.74	1,343.50	12,487.12	79,880.79
Embro.....	Jan., 1915	51.3	18,730.91	9,628.38	1,002.27	4,928.94	34,290.50
Etobicoke Township.....	Aug., 1917	517.5	46,617.14	121,855.70	50.00	14,154.79	182,677.63
Exeter.....	June, 1916	204.5	53,603.18	27,001.84	3,134.66	16,298.03	100,037.71
Fergus.....	Nov., 1914	218.0	39,779.67	35,271.42	.....	17,478.40	92,529.49
Forest.....	Mar., 1917	130.3	44,778.77	41,475.79	3,489.05	12,552.33	102,295.94
Galt.....	May, 1911	3,616.2	273,913.77	690,913.39	825.00	232,038.99	1,197,691.15
Georgetown.....	Sept., 1913	563.1	104,191.96	41,066.27	18,082.65	31,371.35	194,712.23
Glencoe.....	Aug., 1920	72.5	36,947.74	24,781.42	1,559.50	4,127.65	67,416.31
Goderich.....	Feb., 1914	460.3	147,283.42	109,806.87	.....	56,138.14	313,228.43
Granton.....	July, 1916	44.8	13,783.69	4,891.90	2,497.32	2,521.15	23,694.06
Guelph.....	Dec., 1910	4,458.4	287,598.30	349,729.46	25,062.50	163,397.64	825,787.90
Hagersville.....	Sept., 1913	428.9	58,143.55	21,385.23	2,056.42	14,709.26	96,294.46
Hamilton.....	Feb., 1911	18,832.2	1,506,231.82	1,867,729.29	119,081.21	749,716.46	4,242,758.78
Harrison.....	July, 1916	191.2	52,313.23	592,398.81	139.73	11,760.56	83,436.54
Hensall.....	Jan., 1917	54.7	24,157.00	12,755.02	2,957.53	4,827.48	44,697.27
Hespeler.....	Feb., 1911	447.7	37,494.33	59,636.86	935.23	15,372.54	113,438.96
Highgate.....	Dec., 1916	42.8	14,204.31	7,338.11	1,811.51	3,049.39	26,403.32
Ingersoll.....	May, 1911	1,197.8	101,737.64	126,438.64	20,500.00	74,922.99	323,599.27
Kitchener.....	Jan., 1911	7,312.0	517,005.12	592,398.81	24,047.78	179,839.77	1,313,291.48
Lambeth.....	April, 1915	30.9	11,024.12	7,621.26	126.33	3,172.55	21,944.26
Listowel.....	June, 1916	412.8	74,520.49	63,738.48	70.78	14,918.20	153,247.95
London.....	Jan., 1911	15,137.0	1,079,944.93	1,752,008.29	9,058.93	1,017,819.84	3,858,831.99
Lucan.....	Feb., 1915	178.5	30,293.63	16,407.60	8,267.24	7,287.53	62,256.00
Lynden.....	Nov., 1915	96.8	24,206.53	5,298.74	467.10	6,009.20	35,981.57
Markham.....	April, 1920	77.4	18,974.76	16,481.04	.....	3,547.58	39,003.38
Milton.....	April, 1913	894.4	103,995.01	39,286.39	7,382.30	30,819.13	181,482.83
Milverton.....	June, 1916	351.5	52,123.10	16,999.22	.....	11,008.77	80,131.09

*Denotes shortage.

PLANT AND RESERVES WITH THE ASSETS, LIABILITIES AND RESERVES AS AT 31st DECEMBER, 1922

LIABILITIES				RESERVES AND SURPLUSES			
Municipalities' liability in respect to Hydro-Electric Power Commission's plants	Municipal debenture balances	Accounts payable and other liabilities (municipalities only)	Total liabilities	Debentures paid, sinking fund and other reserves	Plant renewal reserves	Surplus	Total reserves and surpluses

SYSTEM

\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
36,641.23	5,646.50	129.33	42,417.06	11,897.04	11,956.39	14,373.16	38,226.59
37,377.93	6,302.26	146.40	43,826.59	1,749.34	7,080.16	7,646.50	16,476.00
31,099.14	1,875.57	22,237.90	55,212.61	280.25	277.86	*262.99	295.12
54,655.55	31,138.55	90.76	85,884.86	8,080.96	9,166.67	12,853.81	30,101.44
16,664.90	7,442.03	10.06	24,116.99	5,970.36	6,181.26	3,209.36	15,360.98
28,038.14	3,930.83	684.27	32,653.24	4,300.28	9,516.60	7,394.97	21,211.85
31,680.56	4,233.43	931.07	36,845.06	4,569.96	11,157.85	12,873.85	28,601.66
38,988.04	12,513.58	4,143.69	55,645.31	3,263.52	11,929.19	7,384.39	22,577.10
40,473.99	10,654.47	6,602.05	57,730.51	3,607.45	13,036.52	*2,527.25	14,116.72
33,282.72	4,469.13	1,420.26	39,172.11	2,749.75	9,114.67	6,081.56	17,945.98
102,723.76	47,736.29	5,365.70	155,825.75	31,864.31	51,786.49	33,639.84	117,290.64
330,713.15	398,750.00	47,526.43	776,989.58	98,651.80	119,761.09	39,530.30	257,943.19
28,448.61	3,712.67	1,832.27	33,993.55	4,490.75	4,656.27	1,182.96	10,329.98
26,054.44	3,575.84	2,613.68	32,243.96	1,849.43	5,126.93	1,957.87	8,934.23
7,044.95	2,700.62	229.61	9,975.18	936.75	1,788.86	534.10	3,259.71
8,596.55	3,789.86	.70	12,387.11	1,700.21	4,365.54	5,808.32	11,874.07
297,627.44	273,966.34	81,365.03	652,958.81	35,961.35	81,467.52	52,965.65	170,394.52
.....	12,543.09	195.22	12,738.31	983.42	1,181.25	4,185.69	6,350.36
43,720.45	40,500.00	369.30	84,589.75	10,867.59	18,379.04	4,793.99	34,004.62
29,223.71	5,898.12	186.09	35,307.92	2,758.34	6,376.74	367.65	9,502.73
20,783.97	3,076.77	20.39	23,881.13	461.54	3,416.15	122.21	3,999.90
4,673.66	3,424.98	257.60	8,356.24	755.02	1,607.81	756.50	3,119.33
10,347.66	20,001.12	5,719.96	36,068.74	3,584.68	5,945.65	*5,198.37	4,331.96
4,354.97	3,773.06	.....	8,128.03	834.08	2,571.90	4,650.46	8,056.44
26,643.07	8,822.61	.....	35,465.68	824.02	4,812.65	3,292.70	8,929.37
25,274.24	11,055.81	.....	36,330.05	6,499.62	10,018.09	10,404.43	26,922.14
5,561.28	3,853.20	.....	9,414.48	1,040.25	2,480.41	947.33	4,467.99
10,235.89	5,106.08	671.40	16,013.37	1,173.07	1,732.94	*1,050.65	1,855.36
55,004.14	43,791.37	4,638.76	103,434.27	18,568.51	38,911.11	26,236.94	83,716.56
82,816.04	60,320.43	8,049.36	151,185.83	5,929.01	16,560.59	6,565.55	29,055.15
18,405.16	7,606.32	.....	26,011.48	1,717.90	6,430.09	5,843.97	13,991.96
56,931.42	17,092.94	92.00	74,116.36	6,418.09	16,842.00	17,186.12	40,446.21
42,935.43	10,097.03	.....	53,032.46	5,654.12	12,740.89	8,453.32	26,848.33
18,730.91	6,850.91	1,646.63	27,228.45	1,792.08	6,301.34	*1,031.37	7,062.05
46,617.14	69,617.84	6,233.41	122,468.39	14,307.03	25,149.35	20,752.86	60,209.24
53,603.18	16,588.13	1,699.96	71,891.27	6,481.80	12,297.19	9,367.45	28,146.44
39,779.67	13,852.61	15,337.57	68,969.85	4,342.44	12,723.89	6,493.31	23,559.64
44,778.77	24,172.18	1,369.89	70,320.84	10,575.80	11,011.43	10,387.87	31,975.10
273,913.77	387,565.04	190,128.10	851,606.91	114,166.10	128,546.36	103,371.78	346,084.24
104,191.96	17,092.91	.....	121,284.87	10,248.08	32,952.59	30,226.69	73,427.36
36,947.74	19,052.03	697.21	56,696.98	2,404.56	2,838.93	5,475.84	10,719.33
147,283.42	39,184.51	16,416.82	202,884.75	29,857.16	58,941.04	21,545.48	110,343.68
13,783.69	3,128.39	592.78	17,504.86	690.29	3,136.25	2,362.66	6,189.20
287,598.30	93,079.38	55,750.25	436,427.93	106,771.37	122,134.26	160,454.34	389,359.97
58,143.55	6,426.62	.....	64,570.17	5,034.12	9,311.80	17,378.37	31,724.29
1,506,231.82	1,489,920.31	242,050.86	3,238,202.99	383,904.83	494,480.49	126,170.47	1,004,555.79
52,313.23	7,623.33	3,476.35	65,260.20	5,153.54	10,935.28	2,087.52	18,176.34
24,157.00	10,875.15	1,606.52	36,638.67	2,104.20	6,378.44	*424.04	8,058.60
37,494.33	28,878.71	4,572.21	70,945.25	23,557.98	13,283.35	5,652.38	42,493.71
14,204.31	4,488.11	.....	18,692.42	870.24	3,744.20	3,096.45	7,710.90
101,737.64	79,800.00	7,462.02	188,999.66	38,464.72	46,083.72	50,051.17	134,599.61
517,005.12	184,081.14	104,151.44	805,237.70	177,287.59	201,130.08	129,636.11	508,053.78
11,024.12	3,571.01	1,123.34	15,718.47	656.26	3,090.25	2,479.28	6,225.79
74,520.49	31,654.64	7,994.52	114,169.65	13,619.96	18,408.86	7,049.48	39,078.30
1,079,944.93	1,045,575.19	410,716.60	2,536,236.72	425,706.70	535,460.75	361,427.82	1,322,595.27
30,293.63	8,761.29	.....	39,054.92	3,879.44	8,598.46	10,723.18	23,201.08
24,206.53	3,981.91	.....	28,188.44	1,704.60	5,679.87	408.66	7,793.13
18,974.76	9,888.45	29.06	28,892.27	1,816.14	2,170.64	6,124.33	10,111.11
103,995.01	12,370.36	3,814.79	120,180.16	18,922.36	27,335.96	15,044.35	61,302.67
52,123.10	7,247.23	538.45	59,908.78	3,622.34	8,841.70	7,758.27	20,222.31

**STATEMENT COMBINING THE HYDRO-ELECTRIC POWER COMMISSION'S
OF THE HYDRO MUNICIPAL UTILITIES,**

ASSETS							
Municipality	Date commenced operation	Average electrical horsepower taken during the year 1922	Proportionate share of Hydro-Electric Power Commission's plant to serve municipalities as ascertained by annual adjustment	Plant value within the boundaries of the municipalities	Bank balances and investments in securities (municipalities only)	Accounts receivable, inventories and other assets	Total assets or municipalities' investment in Niagara system
NIAGARA							
Mimico.....	May, 1912	595.1	\$ 58,465.72	\$ 77,501.79	\$ 1,606.30	\$ 10,690.42	\$ 148,264.23
Mitchell.....	Sept., 1911	224.2	33,708.58	53,167.24	4,470.04	17,588.09	108,933.95
Moorefield.....	Mar., 1918	30.7	14,060.06	4,735.35	959.15	1,758.11	21,512.67
Mount Brydges.....	Mar., 1915	27.3	9,739.76	5,103.06	2,457.03	3,667.45	20,967.30
Newbury.....	Mar., 1921	24.5	9,378.28	9,132.73	207.03	1,328.02	20,046.06
New Hamburg.....	Mar., 1911	245.1	35,102.77	32,958.30	889.04	20,113.13	89,063.24
New Toronto.....	Feb., 1914	1,803.9	171,347.96	67,213.47	12,301.12	56,775.35	307,637.90
Niagara Falls.....	Dec., 1915	4,050.9	39,269.58	490,617.36	26,054.23	48,804.02	604,745.19
Niagara-on-Lake.....	Aug., 1919	185.7	7,998.19	21,537.29	1,745.67	1,267.35	32,548.50
Norwich.....	May, 1912	248.7	38,139.16	25,662.67	9,247.33	17,827.80	90,876.96
Oil Springs.....	Feb., 1918	212.6	39,503.84	21,554.44	1,467.47	6,767.96	69,293.71
Otterville.....	Feb., 1916	40.4	10,173.58	7,028.84	3,258.18	1,430.92	21,891.52
Palmerston.....	July, 1916	197.2	40,943.24	31,939.13	1,935.55	18,332.09	93,150.01
Paris.....	Feb., 1914	897.6	65,850.42	119,625.70	.....	38,301.36	223,777.48
Parkhill.....	May, 1920	61.9	34,399.18	19,583.23	1,729.02	2,390.26	58,101.69
Petrolia.....	May, 1916	611.0	93,825.09	72,749.38	4,000.00	28,937.50	199,511.97
Plattsville.....	Dec., 1914	28.9	15,561.28	5,801.50	69.02	6,985.88	28,417.68
Port Credit.....	Aug., 1912	143.2	21,430.11	19,007.62	5,279.01	3,231.54	48,948.28
Port Dover.....	Dec., 1921	58.1	20,483.53	28,555.11	.....	289.44	49,328.08
Port Stanley.....	April, 1912	207.0	42,727.88	32,347.81	2,769.81	16,493.85	94,339.35
Preston.....	Jan., 1911	1,808.1	128,079.07	179,998.60	50.00	43,381.73	351,509.40
Princeton.....	Jan., 1915	18.5	9,294.16	8,707.92	740.19	2,587.18	16,329.45
Queenston.....	Mar., 1921	36.6	800.07	10,316.85	542.74	89.35	11,749.01
Ridgetown.....	Dec., 1915	205.2	40,667.08	30,570.64	16,892.15	13,213.37	101,343.24
Rockwood.....	Sept., 1913	50.7	14,590.85	9,313.81	148.83	4,788.36	28,841.85
Rodney.....	Feb., 1917	67.8	15,981.58	12,149.85	2,614.79	3,810.11	34,556.33
St. George.....	Sept., 1915	72.9	6,471.84	6,611.29	6,169.83	4,168.61	23,421.57
St. Jacobs.....	Sept., 1917	66.2	10,143.36	6,857.23	3,737.80	2,153.92	22,892.31
St. Marys.....	May, 1911	892.8	106,761.28	118,364.49	.....	50,643.69	275,769.46
St. Thomas.....	April, 1911	2,742.8	239,026.38	329,930.04	20,693.93	148,616.03	738,266.38
Sarnia.....	Dec., 1916	3,297.9	501,993.95	488,958.06	594.21	109,227.07	1,100,773.29
Scarboro Township.....	Aug., 1918	295.3	17,598.46	87,708.11	2,533.69	8,201.03	116,131.29
Seaforth.....	Nov., 1911	339.7	63,449.95	47,579.92	10,696.69	46,808.05	168,534.61
Simcoe.....	Aug., 1915	348.4	38,816.64	55,653.73	6,000.00	8,563.08	109,033.45
Springfield.....	Aug., 1917	18.6	8,999.28	6,813.80	272.73	1,596.28	17,682.09
Stamford Township.....	Nov., 1916	473.3	9,747.62	109,833.27	1,101.14	7,363.44	128,045.47
Stratford.....	Jan., 1911	2,955.9	289,592.57	446,465.59	28,177.56	208,709.87	972,945.59
Strathroy.....	Dec., 1914	453.7	84,136.77	72,273.56	4,099.62	33,465.29	193,975.24
Tavistock.....	Nov., 1916	275.3	47,760.33	13,866.57	9,264.06	10,043.09	80,934.05
Thamesford.....	Feb., 1914	99.6	22,315.14	8,828.22	1,920.88	6,793.41	39,857.65
Thamesville.....	Oct., 1915	79.1	16,984.29	15,392.58	4,449.09	6,083.32	42,909.28
Theford.....	May, 1922	15.2	20,144.17	13,017.64	3,319.74	329.48	36,811.03
Thorndale.....	Mar., 1914	47.8	15,940.62	4,804.14	762.56	5,264.40	26,771.72
Tilbury.....	April, 1915	186.6	33,916.41	20,577.00	.....	9,544.74	64,038.15
Tillsonburg.....	Aug., 1911	364.3	61,993.86	65,654.81	14,628.68	42,113.62	184,390.97
Toronto.....	June, 1911	73,676.9	4,519,247.27	21,617,537.68	444,846.09	6022,162.74	32,603,793.78
Toronto Township.....	Aug., 1913	288.8	25,426.17	113,893.25	12,077.88	10,511.73	972,999.03
Walkerville.....	Nov., 1914	4,401.9	625,776.06	425,800.65	50.00	287,532.93	1,339,159.64
Wallaceburg.....	Feb., 1915	787.1	124,703.74	91,214.37	11,409.14	60,738.74	288,065.99
Wardsville.....	June, 1921	11.3	6,832.59	6,676.91	1,936.64	148.05	15,594.19
Waterdown.....	Nov., 1911	137.5	18,960.08	15,224.64	6,374.00	6,501.54	47,060.26
Waterford.....	April, 1915	171.2	21,067.73	17,970.52	3,810.26	4,580.39	47,428.89
Waterloo.....	Dec., 1910	1,468.0	107,984.45	188,122.80	1,022.27	50,156.96	347,286.48
Watford.....	Sept., 1917	68.1	31,616.87	17,489.00	147.02	6,734.47	55,987.36
Welland.....	Sept., 1917	1,711.5	89,950.29	259,267.34	100.00	139,167.46	488,485.09
Wellesley.....	Nov., 1916	132.4	29,715.82	8,672.65	2,748.08	4,878.77	46,015.32
West Lorne.....	Jan., 1917	176.5	32,393.34	13,042.41	5,408.66	4,533.34	55,377.75
Weston.....	Jan., 1911	1,195.4	112,203.64	105,185.39	5,515.73	34,516.21	257,420.97
Windsor.....	Oct., 1914	7,166.3	1,011,472.81	1,426,350.59	11,193.03	526,350.08	2,975,366.51
Woodbridge.....	Dec., 1914	180.6	28,171.72	14,732.28	6,945.57	6,133.83	55,983.40

*Denotes shortage.

PLANT AND RESERVES WITH THE ASSETS, LIABILITIES AND RESERVES
AS AT 31st DECEMBER, 1922—Continued

LIABILITIES				RESERVES AND SURPLUSES			
Municipalities' liability in respect to Hydro-Electric Power Commission's plants	Municipal debenture balances	Accounts payable and other liabilities (municipalities only)	Total liabilities	Debentures paid, sinking fund and other reserves	Plant renewal reserve	Surplus	Total reserves and surpluses

SYSTEM

\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
58,465.72	39,740.51	7,302.96	105,509.19	9,412.89	19,727.02	13,615.13	42,755.04
33,708.58	6,191.39	736.76	40,636.73	20,172.77	25,573.86	22,550.59	68,297.22
14,060.06	3,795.21	232.49	18,087.76	788.14	2,208.76	428.01	3,424.91
9,739.76	3,653.53	.....	13,393.29	1,094.35	3,698.81	2,780.85	7,574.01
9,378.28	8,700.00	398.84	18,477.12	1,091.55	399.14	78.25	1,568.94
35,102.77	13,687.67	38.62	48,829.06	8,411.15	20,388.40	11,434.63	40,234.18
171,347.96	6,672.25	11,628.36	189,648.57	18,795.57	42,029.92	57,163.84	117,989.33
39,269.58	326,751.25	23,539.77	389,560.60	114,371.15	44,785.55	56,027.89	215,184.59
7,998.19	7,738.45	434.65	16,171.29	3,573.67	1,930.63	10,872.91	16,377.21
38,139.16	10,955.66	1,189.02	50,283.84	6,532.16	20,422.48	13,638.48	40,593.12
39,503.84	14,607.58	2,755.64	56,867.06	2,544.38	4,795.86	5,086.41	12,426.65
10,173.58	3,473.18	50.47	13,697.23	1,192.26	2,421.73	4,580.30	8,194.29
40,943.24	13,049.37	799.26	54,791.87	15,127.91	10,180.74	13,049.49	38,358.14
65,850.42	42,952.71	2,418.65	111,221.78	62,125.54	35,942.43	14,487.73	112,555.70
34,399.18	13,356.07	.....	47,755.25	1,230.95	2,708.77	6,406.72	10,346.44
93,825.09	43,161.13	5,053.31	142,039.53	9,991.98	25,158.83	22,321.63	57,472.44
15,561.28	4,484.30	1,452.07	12,497.65	2,297.38	6,749.92	*2,127.27	6,920.03
21,430.11	5,896.04	1,192.99	28,519.14	3,610.67	7,354.37	9,464.10	20,429.14
20,483.53	19,824.01	6,423.50	46,731.04	1,235.61	756.82	604.61	2,597.04
42,727.88	14,569.34	13.90	57,311.12	8,477.06	19,388.29	9,162.88	37,028.23
128,079.07	55,922.29	36,387.33	220,388.69	52,320.00	61,662.42	17,138.29	131,120.71
9,294.16	3,039.75	1,070.78	13,404.69	1,090.26	2,826.81	*992.31	2,924.76
800.07	7,782.52	2,127.32	10,709.91	276.40	187.94	574.76	1,039.10
40,667.08	13,754.34	1,319.10	55,740.52	7,716.26	12,633.01	25,253.45	45,602.72
14,590.85	.....	678.83	15,269.68	3,026.07	5,958.89	4,587.21	13,572.17
15,981.58	7,691.76	.....	23,673.34	984.76	4,009.80	5,888.43	10,882.99
6,471.84	5,194.69	50.43	11,716.96	1,470.49	4,097.09	6,137.03	11,704.61
10,143.36	5,039.51	134.00	15,316.87	1,160.94	2,518.71	3,895.79	7,575.44
106,761.28	41,757.81	9,903.65	158,422.74	54,730.06	54,044.95	8,571.71	117,346.72
239,026.38	86,319.25	28,259.07	353,604.70	88,684.22	130,544.54	165,432.92	384,661.68
501,993.95	258,907.19	25,028.18	785,929.32	53,235.57	113,661.58	147,946.82	314,843.97
17,598.46	38,510.53	36,412.52	92,521.51	7,162.47	9,082.95	7,364.35	23,609.78
63,449.95	25,000.00	2,059.86	90,509.81	16,406.48	38,791.57	22,826.75	78,024.80
38,816.64	34,631.60	4,578.29	78,026.53	2,150.33	14,229.75	14,626.84	31,006.92
8,999.28	2,296.00	95.12	11,390.40	2,784.85	1,379.60	2,127.24	6,291.69
9,747.62	72,734.60	18,528.42	101,010.64	6,571.91	9,547.51	10,915.41	27,034.83
289,592.57	362,000.00	7,272.74	658,865.31	126,392.36	137,872.04	49,815.88	314,080.28
84,136.77	34,963.01	.....	119,099.78	16,309.48	28,020.21	30,545.77	74,875.46
47,760.33	5,385.71	.....	53,146.04	1,825.12	8,634.36	17,328.53	27,788.01
22,315.14	4,174.62	320.51	26,810.27	2,482.63	6,722.38	3,842.37	13,047.38
16,984.29	9,115.03	.....	26,099.32	2,951.86	6,118.15	7,739.95	16,809.96
20,144.17	16,051.45	7.29	36,202.91	464.15	139.30	4.67	608.12
15,940.62	2,468.57	1,440.20	19,849.39	2,188.90	4,722.00	11.43	6,922.33
33,916.41	11,930.70	292.33	46,139.44	3,517.95	9,262.36	5,118.40	17,898.71
61,993.86	27,749.84	4,439.85	94,183.55	22,667.62	41,613.30	25,926.50	90,207.42
4,519,247.27	17,614,650.51	1,912,331.88	24,046,229.66	3,655,906.79	3,641,969.02	1,259,688.31	8,557,564.12
25,426.17	76,261.78	995.00	102,682.95	4,460.60	27,867.86	26,897.62	59,226.08
625,776.06	218,338.47	152,409.67	996,524.20	76,243.79	155,448.40	110,943.25	342,635.44
124,703.74	64,283.81	3,776.83	192,764.38	13,284.53	37,373.52	44,643.56	95,301.61
6,832.59	7,344.92	357.98	14,535.49	231.98	253.55	573.17	1,058.70
18,960.08	4,570.67	3.02	23,533.77	5,556.47	12,759.08	5,210.94	23,526.49
21,067.73	.....	242.76	21,310.49	8,849.93	6,624.64	10,643.83	26,118.40
107,984.45	91,945.69	5,702.39	205,632.53	30,749.93	66,925.85	43,978.17	141,653.95
31,616.87	7,629.10	595.37	39,841.34	2,273.70	7,248.43	6,623.89	16,146.02
89,950.29	199,048.54	85,539.40	374,538.23	42,712.59	74,828.05	*3,593.78	113,946.86
29,715.82	6,077.86	193.12	35,986.80	2,179.09	6,802.51	2,046.92	11,028.52
32,393.34	7,294.15	.....	39,687.49	1,259.13	4,037.26	10,393.87	15,690.26
112,203.64	37,907.21	8,344.64	158,455.49	18,856.22	41,490.43	38,618.83	98,965.48
1,011,472.81	1,082,316.60	330,472.58	2,424,261.99	142,427.82	211,147.55	197,529.15	551,104.52
28,171.72	7,529.91	839.21	36,540.84	2,546.55	7,615.55	9,280.45	19,442.56

**STATEMENT COMBINING THE HYDRO-ELECTRIC POWER COMMISSION'S
OF THE HYDRO MUNICIPAL UTILITIES,**

ASSETS

Municipality	Date commenced operation	Average electrical horsepower taken during the year 1922	Proportionate share of Hydro-Electric Power Commission's plant to serve municipalities as ascertained by annual adjustment	Plant value within the boundaries of the municipalities	Bank balances and investments in securities (municipalities only)	Accounts receivable, inventories and other assets	Total assets or municipalities' investment in Niagara System
NIAGARA							
Woodstock.....	Jan., 1911	2,142.5	\$ c. 139,769.50	\$ c. 264,213.75	\$ c. 944.37	\$ c. 74,804.87	\$ c. 479,732.49
Wyoming.....	Nov., 1916	38.7	12,729.42	9,926.56	1,156.22	4,390.29	28,202.49
Zurich.....	Sept., 1917	51.2	26,682.21	6,876.44	5,063.42	4,017.42	42,639.49
Merrittton.....	Nov., 1920	217.3	28,269.35	1,061.86	2,309.32	31,640.53	
St. Catharines.....		4,222.1	19,383.54	435,158.57	1,316.41	48,169.85	504,028.37
Port Dalhousie.....	Nov., 1912	162.9	5,834.33	25,287.60	1,743.19	5,215.66	38,080.78
Grantham Township.....	May, 1915	39.0	28,289.47	16,386.89	633.04	9,304.85	54,614.25
Port Colborne.....	Mar., 1920	473.4	70,533.48	201.99	7,727.62	78,463.09	
Belle River.....			12,183.41		1,816.59	14,000.00	
Ford.....			72,548.30		2,294.22	74,842.52	
Merlin.....			7,835.78		2,239.97	10,075.75	
Point Edward.....			15,732.30			15,732.30	
Riverside.....			38,206.80		1,450.28	39,657.08	
St. Clair Beach.....			5,992.66		3,854.42	9,847.08	
Tecumseh.....			26,120.45		309.12	26,429.57	
RURAL POWER DISTRICTS.							
Aylmer.....		6.7	6,218.61		714.21	6,932.82	
Baden.....		19.9	10,629.67		462.84	11,092.51	
Brant.....		3.2	8,914.26		1,247.06	10,161.32	
Chatham.....		26.0	23,592.83		1,577.65	25,170.48	
Chippawa.....		3.2	17,378.88		773.88	18,152.76	
Dorchester.....		42.1	45,424.51		4,527.89	49,952.40	
Drumbo.....		3.2	9,787.62		291.23	10,078.85	
Dundas.....		5.4	16,168.88		2,529.48	18,698.36	
Galt.....		.5	1,963.50		68.21	2,031.71	
Ingersoll.....			495.90		792.12	1,288.02	
Jordan.....		1.8	2,103.45		193.90	2,297.35	
Lynden.....		6.6	8,449.72		508.69	8,958.41	
Niagara.....		15.0	8,102.12		913.69	9,015.81	
Preston.....		99.5	37,952.16		6,346.63	44,298.79	
Ridgetown.....		14.1	27,938.48		2,545.99	30,484.47	
Saltfleet.....		69.1	100,321.46		5,868.62	106,190.08	
Sandwich.....		5.8	4,421.54		554.92	4,976.46	
Stamford.....		10.2	10,164.85		859.30	11,024.15	
Welland.....		3.6	3,533.32		266.49	3,799.81	
Woodstock.....			1,536.69		3,199.01	4,735.70	
Totals—Municipalities.....			16,331,243.73	36,464,372.20	1,119,993.76	11,685,879.87	65,601,489.56
Rural Districts not included in above.....			338,688.94	421,071.31	11,787.21	49,210.14	820,757.60
Companies and Government Industries.....			2,802,655.78			798,737.67	3,601,393.45
Less Renewals Expense and Adjustments.....						12,533,827.68	70,023,640.61
Totals—Municipalities, Rural Districts and Companies.....			19,472,588.45	36,885,443.51	1,131,780.97	12,314,890.96	69,803,703.89
Chippawa Development Works.....			65,642,615.86				65,642,615.86
Power Development Plant at Niagara Falls (purchased from Ontario Power Company August, 1917).....			26,914,720.75			1,151,668.56	28,066,389.31
Totals of Niagara System Revenue-producing properties in operation as at 31st December, 1922.....			112,029,925.06	36,885,443.51	1,131,780.97	13,466,559.52	163,513,709.06
PLANTS UNDER CONSTRUCTION—							
Transformer Stations, Transmission Lines and additions and extensions to the System to serve Municipal and Rural Service.....			2,246,230.96				2,246,230.96
Grand Totals of all Properties connected with Niagara System in Service and under Construction.....			114,276,156.02	36,885,443.51	1,131,780.97	13,466,559.52	165,759,940.20

*Denotes shortage

PLANT AND RESERVES WITH THE ASSETS, LIABILITIES AND RESERVES
AS AT 31st DECEMBER, 1922—Continued

LIABILITIES				RESERVES AND SURPLUSES			
Municipalities' liability in respect to Hydro-Electric Power Commission's plants	Municipal debenture balances	Accounts payable and other liabilities (municipalities only)	Total liabilities	Debentures paid, sinking fund and other reserves	Plant renewal reserves	Surplus	Total reserves and surpluses
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
139,769.50	67,385.63	5,235.27	212,390.40	79,285.79	86,517.68	100,538.62	266,342.09
12,729.42	7,895.30	2,995.87	23,620.59	2,237.93	3,572.98	*1,229.01	4,581.90
26,682.21	5,233.45	.....	31,915.66	520.18	4,839.24	5,364.41	10,723.83
.....	4,072.84	1,224.22	5,297.06	1,178.28	1,497.00	23,668.19	26,343.47
19,383.54	210,741.94	61,362.23	291,487.71	49,201.99	65,680.30	97,658.37	212,540.66
5,834.33	19,422.08	1,284.67	26,541.08	4,218.62	5,641.25	1,679.83	11,539.70
28,289.47	10,681.99	5,957.33	44,928.79	6,730.53	2,886.90	68.03	9,685.46
.....	48,039.52	17,850.14	65,889.66	4,407.13	2,985.00	5,181.30	12,573.43
.....	9,000.00	.....	9,000.00	.....	.....	5,000.00	5,000.00
.....	63,000.00	7,312.68	70,312.68	.....	2,877.17	1,652.67	4,529.84
.....	8,505.00	1,570.75	10,075.75	.....	.....	.....	.....
.....	5,402.82	5,058.78	10,461.60	1,597.18	2,851.00	822.52	5,270.70
.....	29,500.00	7,702.45	37,202.45	.....	1,171.69	1,282.94	2,454.63
.....	6,341.45	3,507.67	9,849.12	.....	.....	*2.04	*2.04
.....	18,048.73	8,397.84	26,446.57	451.27	626.62	*1,094.89	*17.00
6,218.61	.....	1,339.84	7,558.45	423.85	290.36	*1,339.84	*625.63
10,629.67	.....	388.52	11,018.19	186.51	276.33	*388.52	74.32
8,914.26	.....	64.61	8,978.87	161.06	326.71	694.68	1,182.45
23,592.83	.....	.....	23,592.83	346.69	357.86	873.10	1,577.65
17,378.88	.....	.....	17,378.88	101.77	184.48	487.63	773.88
45,424.51	.....	.....	45,424.51	407.94	570.99	3,548.96	4,527.89
9,787.62	.....	.....	9,787.62	186.51	85.16	143.30	291.23
16,168.88	.....	.....	16,168.88	389.79	803.88	1,335.81	2,529.48
1,963.50	.....	.....	1,963.50	4.89	6.61	56.71	68.21
495.90	.....	.....	495.90	154.42	339.74	297.96	792.12
2,103.45	.....	.....	2,103.45	17.09	23.26	153.55	193.90
8,449.72	.....	.....	8,449.72	109.85	110.28	288.56	508.69
8,102.12	.....	.....	8,102.12	115.69	207.72	590.28	913.69
37,952.16	.....	.....	37,952.16	641.15	942.17	4,763.31	6,346.63
27,938.48	.....	.....	27,938.48	163.82	232.78	2,149.39	2,545.99
100,321.46	.....	.....	100,321.46	907.09	1,458.07	3,503.46	5,868.62
4,421.54	.....	.....	4,421.54	27.72	35.43	491.77	554.92
10,164.85	.....	.....	10,164.85	119.04	176.15	564.11	859.30
3,533.32	.....	.....	3,533.32	36.25	45.29	184.95	266.49
1,536.69	.....	.....	1,536.69	566.25	1,230.13	1,402.63	3,199.01
16,331,243.73	26,380,725.96	4,150,590.13	46,862,559.82	6,630,958.64	7,815,489.15	4,292,481.95	18,738,929.74
338,688.94	337,794.42	68,300.84	744,784.20	28,451.59	47,762.04	*240.23	75,973.40
2,802,655.78	.....	.....	2,802,655.78	356,483.00	442,254.67	.....	798,737.67
.....	Less Renew	als Expense a	nd Adjustme	nts.....	8,305,505.86	.....	19,613,640.81
.....	.....	.....	.....	.....	218,936.72	.....	218,936.72
19,472,588.45	26,718,520.38	4,218,890.97	50,409,999.80	7,015,893.23	8,086,569.14	4,292,241.72	19,394,704.09
65,642,615.86	.....	.....	65,642,615.86	.....	.....	.....	.....
25,405,676.62	.....	633,940.91	26,039,617.53	549,242.00	1,387,736.85	89,792.93	2,026,771.78
110,520,880.93	26,718,520.38	4,852,831.88	142,092,233.19	7,565,135.23	9,474,305.99	4,382,034.65	21,421,475.87
2,246,230.96	.....	.....	2,246,230.96	.....	.....	.....	.....
112,767,111.89	26,718,520.38	4,852,831.88	144,338,464.15	7,565,135.23	9,474,305.99	4,382,034.65	21,421,475.87

HYDRO-ELECTRIC POWER COMMISSION BALANCE SHEETS OF THE MUNICIPALITIES OF THE SEVERN, EUGENIA, WASDELLS, MUSKOKA, ST. LAWRENCE AND RIDEAU SYSTEMS, DECEMBER 31, 1922

The Commission submits herewith statements of the Severn, Eugenia, Wasdells, Muskoka, St. Lawrence and Rideau systems' assets, liabilities, reserves and surpluses reflecting the operations of the Hydro-Electric Power Commission of Ontario and the municipalities since the commencement of operation to December 31, 1922.

Explanation of the Various Columns of the Balance Sheets

Column 1—Gives the names of the municipalities now under contract with the Hydro-Electric Power Commission of Ontario for a supply of electrical energy and the dates upon which each municipality commenced to receive this supply of power.

Column 2—Gives the average electrical horsepower delivered to each municipality by the Hydro-Electric Power Commission of Ontario during the year.

ASSETS

Column 3—Shows the cost of the plant of the Hydro-Electric Power Commission of Ontario as annually adjusted and apportioned to each municipality having a contract with the Commission and receiving power from the systems during the year. These plants are owned and operated by the Commission. They comprise the generating equipment, the transformer stations and transmission lines necessary to transform the power and transmit it to the municipalities, and are administered, operated and maintained by the Hydro-Electric Power Commission for the contracting municipalities by means of revenue derived from the sale, on the basis of COST, of electrical energy to the municipalities and to sundry other customers.

Column 4—Gives the cost of plants within the boundaries of the respective municipalities. These plants are financed, operated and maintained by the municipalities from the revenue derived from the utilities' customers.

Column 5—Shows the bank balance and investment of surplus funds in Government and other authorized securities and investments made by each municipal Hydro-electric utility.

Column 6—Gives sinking funds, in respect of local plants on deposit with municipal treasurers; sinking funds in respect of Commission's plant on deposit with Commission and invested in provincial securities, also municipal accounts receivable and inventories, together with the sum of \$462,106.58 on deposit with the Hydro-Electric Power Commission of Ontario for the purpose of renewing its stations and lines.

NOTE:—Amongst other charges, the cost of power to the Commission as charged to municipalities includes an annual levy (after the five-year exemption period according to the Power Commission Act) for sinking fund for the specific purpose of liquidating the Commission's debt to the Provincial Government,

and also includes a renewals reserve fund for the replacement of transforming and transmitting equipment. These accumulations represent a municipal equity in present and future plants and therefore the sum of both these funds is reflected as an asset.

Column 7—Totals columns 3, 4, 5 and 6 and shows the total investment of each municipality.

LIABILITIES

Column 8—Gives the municipalities' liability in respect to the Hydro-Electric Power Commission's plants. The total of this column represents the sum invested by the Commission in stations, lines and generating plants (see column 3), which sum is being repaid by the contracting municipalities by deposits to the Commission's sinking fund collected in the cost of power. These sinking funds in accordance with the Power Commission Act, are invested in provincial securities.

Column 9—Shows the municipal debenture debt in respect of Hydro municipal plants within the municipal boundaries. This debt is created by the issuance of municipal serial or sinking fund debentures, which, in the majority of cases, are redeemable in twenty years.

Column 10—Gives the municipal accounts payable and other liabilities of the municipalities.

Column 11—Gives the total debt of each municipality in respect of local plants, the Commission's stations and lines.

RESERVES

Column 12—Shows the reserves arising from sinking fund payments and municipal debenture retirals in respect of local plants and the Hydro Commission's stations and lines.

NOTE:—The cost of power to the Commission as charged to municipalities includes, amongst other charges, an annual levy (after the five-year exemption period provided for in the Power Commission Act) for sinking fund for the purpose of liquidating the Hydro-Electric Power Commission's debt to the Provincial Government. The totals of the sums so paid in accordance with provisions of the Act, are invested in provincial securities.

Column 13—Shows reserve fund provided by the municipalities for renewing local plants and Commission's stations and lines, (see column 6).

NOTE:—The cost of power to the Commission as charged to municipalities includes, amongst other charges, an annual levy in respect of a renewals fund for the specific purpose of replacing development plants, transforming and transmitting equipment.

SURPLUS

Column 14—Shows the sum which municipal Hydro utilities have accumulated after having met or having made provision to meet every expense on account of interest, operation and maintenance, and after meeting all debenture payments, sinking fund, renewal and contingency charges for both local systems as well as for the provincial Hydro properties at present in operation.

Column 15—Totals reserves and surpluses as given in columns 12, 13 and 14.

**STATEMENT COMBINING THE HYDRO-ELECTRIC POWER COMMISSION'S
OF THE HYDRO MUNICIPAL UTILITIES,**

ASSETS

Municipality	Date commenced operating	Average electrical horsepower taken in the year 1922	Proportionate share of Hydro-Elec- tric Power Commission's plant to serve municipality as ascer- tained by an- nual adjust- ment	Plant value with- in the boundaries of the municipali- ties	Bank balances and invest- ments in securities (municipal- ities only)	Accounts receivable, inventories and other assets	Total assets or municipali- ties investments
SEVERN							
Alliston	June, 1918	111.9	\$ c. 67,702.03	\$ c. 43,165.97	\$ c. 1,048.99	\$ c. 7,189.42	\$ c. 119,106.41
Barrie	April, 1913	866.9	177,192.67	134,553.70	45,860.41	50,374.50	407,981.28
Beeton	Aug., 1918	84.5	61,101.98	15,956.13	411.99	4,320.30	81,790.40
Bradford	Oct., 1918	58.9	54,743.86	20,396.18	502.27	3,426.09	79,068.40
Coldwater	Mar., 1913	83.7	20,291.23	11,381.84	1,151.48	7,741.73	40,566.28
Collingwood	Mar., 1913	1,124.3	277,030.92	102,129.77	8,476.05	82,987.86	470,624.60
Cookstown	May, 1918	52.1	22,990.20	13,774.07	450.07	2,934.20	40,148.54
Creemore	Nov., 1914	53.	24,754.14	11,085.47	5,537.73	7,302.99	48,680.33
Elmvale	June, 1913	150.8	30,481.93	11,647.83	2,419.17	8,086.97	52,635.90
Midland	July, 1911	1,290.3	231,618.34	162,758.72	6,839.91	70,587.46	471,804.43
Penetang	July, 1911	695.1	132,207.66	67,393.11	.....	52,620.47	252,221.24
Port McNicoll	Jan., 1915	43.3	8,888.64	8,453.19	191.18	1,252.22	18,785.23
Stayner	Oct., 1913	120.5	30,484.00	19,813.40	2,106.76	9,385.09	61,789.25
Thornton	Nov., 1918	13.8	11,599.45	7,575.91	186.68	620.31	19,982.35
Tottenham	Oct., 1918	38.6	37,845.15	12,654.42	1,199.17	2,054.01	53,752.75
Victoria Harbor	July, 1914	46.	12,872.55	8,476.53	2,060.39	3,635.37	27,044.84
Waubashene	Dec., 1914	25.4	6,876.08	4,717.94	1,638.70	1,656.38	14,889.10
Rural districts not included in above			12,439.41	.....	.....	699.78	13,139.19
Companies and Government industries			266,781.32	.....	.....	39,411.25	306,192.57
Plant under construction for municipal service			814.29	.....	.....	.....	814.29
Less renewals, expenses and adjustments .....			.....	.....	.....	356,286.40 7,629.37	2,581,017.38 7,629.37
Totals—Municipalities, rural districts and companies		4,859.1	1,488,715.85	655,934.18	80,080.95	348,657.03	2,573,388.01

TOTAL ASSETS \$2,573,388.01

PLANT AND RESERVES WITH THE ASSETS, LIABILITIES AND RESERVES AS AT 31st DECEMBER, 1922—Continued

LIABILITIES				RESERVES AND SURPLUSES			
Municipalities' proportionate share of Hydro-Electric Power Commission's debt to the Province	Municipal debenture balances	Accounts payable and other liabilities (municipalities only)	Total liabilities	Debentures paid sinking fund and other reserves	Plant renewal reserves	Surplus	Total reserves and surpluses

SYSTEM

[illegible]

PLANT AND RESERVES WITH THE ASSETS, LIABILITIES AND RESERVES
AS AT 31st DECEMBER, 1922—Continued

LIABILITIES				RESERVES AND SURPLUSES			
Municipalities' proportionate share of Hydro-Electric Power Commission's debt to the Province	Municipal debenture balance	Accounts payable and other liabilities (municipalities only)	Total liabilities	Debentures paid sinking fund and other reserves	Plant renewal reserves	Surplus	Total reserves and surpluses
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
80,105.00	19,434.97	11,556.03	111,096.00	3,205.07	10,814.10	*13,735.44	283.73
12,532.91	5,278.83	548.23	18,359.97	1,667.39	2,283.58	*617.89	3,333.08
101,460.10	21,432.23	57.28	122,949.61	7,845.30	13,402.52	4,029.15	25,276.97
26,851.53	3,816.26	589.41	31,257.20	3,592.44	4,828.53	3,545.41	11,966.38
89,408.27	21,293.74	1,182.71	111,884.72	7,177.86	8,248.12	5,347.73	20,773.71
14,972.26	6,186.76	506.17	21,665.19	1,140.92	2,021.06	*765.98	2,396.00
15,851.81	5,993.36	2,263.81	24,108.98	1,332.59	3,184.43	*969.40	3,547.62
34,660.97	8,914.17	.....	43,575.14	2,723.45	4,845.29	2,502.14	10,070.88
355,765.15	78,012.29	6,408.24	440,185.68	15,239.35	26,397.07	9,144.91	50,781.33
12,126.35	2,050.79	4,424.88	18,602.02	931.22	1,592.79	*4,064.54	*1,540.53
107,705.29	61,960.00	7,859.56	177,524.85	5,722.36	3,151.26	*10,491.23	*1,617.61
55,709.19	18,939.94	166.07	74,815.20	783.42	1,532.60	1,188.71	3,504.73
23,805.79	8,044.76	2,561.85	34,412.40	1,406.95	4,915.12	4,963.95	11,286.02
75,133.68	22,322.84	5,536.50	102,993.02	11,773.06	14,440.88	*578.75	25,635.19
74,464.82	15,230.19	10,438.93	100,133.94	1,769.81	4,629.57	*3,928.61	2,470.77
94,006.13	27,028.56	7,876.39	128,911.08	8,495.92	13,180.24	*6,265.45	15,410.71
399,647.28	141,000.00	21,537.39	562,184.67	125,886.09	68,501.89	51,055.52	245,443.50
6,431.07	6,588.15	428.40	13,447.62	411.85	240.32	*620.72	31.45
50,884.34	13,557.63	286.49	64,728.46	414.31	1,332.65	*335.68	1,411.28
51,261.77	15,783.11	2,136.49	69,181.37	5,335.22	8,540.00	473.66	14,348.88
42,434.88	13,546.90	6,208.59	62,190.37	1,953.10	4,649.78	*6,281.51	321.37
56,249.99	27,433.36	610.63	84,293.98	2,688.80	1,568.61	*1,235.83	3,021.58
171,844.29	72,039.24	1,266.77	245,150.30	24,066.26	8,688.75	970.94	33,725.95
6,471.97	.....	.....	6,471.97	190.18	93.47	.....	283.65
59,951.21	.....	.....	59,951.21	2,667.38	24,669.70	.....	27,337.08
103.61	.....	.....	103.61	.....	.....	.....	.....
Less renewals, expenses and adjustments	.....	.....	.....	.....	237,752.33	.....	509,503.72
.....	.....	.....	.....	.....	4,937.65	.....	4,937.65
2,019,839.66	615,888.08	94,450.82	2,730,178.56	238,420.30	232,814.68	33,331.09	504,566.07
.....	.....	.....	.....	Liabilities	.....	.....	2,730,178.56

TOTAL LIABILITIES, RESERVES AND SURPLUSES \$3,234,744.63

*Denotes deficit.

PLANT AND RESERVES WITH THE ASSETS, LIABILITIES AND RESERVES
AS AT DECEMBER 31st, 1922—Continued

LIABILITIES				RESERVES AND SURPLUSES			
Municipalities' proportionate share of Hydro-Electric Power Commission's debt to the Province	Municipal debenture balances	Accounts payable and other liabilities (municipalities only)	Total liabilities	Debentures paid sinking fund and other reserves	Plant renewal reserves	Surplus	Total reserves and surpluses

SYSTEM

\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
34,437.46	12,840.35	.....	47,277.81	4,080.28	7,415.86	6,853.88	18,350.02
22,406.29	2,787.08	3,491.56	28,684.93	1,508.39	3,570.71	*2,954.07	2,125.03
28,284.17	13,129.87	358.81	41,772.85	3,542.98	7,668.94	1,372.47	12,584.39
13,242.96	5,664.01	730.90	19,637.87	335.99	739.56	*19.46	1,056.09
26,693.35	.....	19,055.04	45,748.39	.....	62.66	*83.58	*20.72
26,292.70	8,073.37	2,966.32	37,332.39	2,888.54	4,844.63	*2,350.78	5,382.39
31,620.99	.....	15,158.15	46,779.14	.....	71.86	41.86	113.72
29,502.05	4,783.59	1,821.53	36,107.17	2,305.11	4,793.17	*94.25	7,004.03
14,955.95	.....	.....	14,955.95	885.27	.....	.....	885.27
166,571.39	.....	.....	166,571.39	9,098.92	18,330.03	.....	27,428.95
.....	.....	.....	.....	.....	47,497.42	.....	74,908.97
Less renewals, expenses and adjustments	.....	.....	.....	.....	3,222.02	.....	3,222.02
394,007.31	47,278.27	43,582.31	484,867.89	24,645.48	44,275.40	2,766.07	71,686.95
Liabilities	.....	.....	.....	.....	.....	.....	484,867.89
TOTAL LIABILITIES, RESERVES AND SURPLUSES							\$556,554.84

SYSTEM

\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
37,135.97	36,233.52	5,463.46	78,832.95	32,309.72	15,177.70	*1,441.40	46,046.02
175,370.84	15,760.92	6,252.74	197,384.50	8,442.46	18,076.48	13,329.16	39,848.10
284.01	.....	.....	284.01	5.13	19.23	.....	24.36
.....	.....	.....	.....	.....	33,273.41	.....	85,918.48
Less renewals, expenses and adjustments	.....	.....	.....	.....	1,379.65	.....	1,379.65
212,790.82	51,994.44	11,716.20	276,501.46	40,757.31	31,893.76	11,887.76	84,538.83
Liabilities	.....	.....	.....	.....	.....	.....	276,501.46
TOTAL LIABILITIES, RESERVES AND SURPLUSES							\$361,040.29

*Denotes deficit.

**STATEMENT COMBINING THE HYDRO-ELECTRIC POWER COMMISSION'S
OF THE HYDRO MUNICIPAL UTILITIES.**

ASSETS							
Municipality	Date commenced operating	Average electrical horsepower taken in the year 1922	Proportionate share of Hydro-Electric Power Commission's plant to serve municipality as ascertained by annual adjustment	Plant value within the boundaries of the municipalities	Bank balances and investments in securities (municipalities only)	Accounts receivable, inventories and other assets	Total assets or municipalities investments
ST. LAWRENCE							
Alexandria.....	Jan., 1921	154.9	\$ 115,671.74	\$ 42,381.95	\$ 1,754.77	\$ 5,771.42	\$ 165,579.88
Apple Hill.....	April, 1921	19.4	11,254.04	5,896.50	291.26	686.15	18,127.95
Brockville.....	April, 1915	1,153.6	288,408.66	209,390.82	200.00	146,229.18	644,228.66
Chesterville.....	April, 1914	143.8	68,995.70	11,819.38	318.23	19,688.78	100,822.09
Lancaster.....	May, 1921	21.1	37,607.89	9,631.80	371.45	1,650.30	49,261.44
Martintown.....	May, 1921	11.9	6,374.86	4,680.80	1,192.92	327.12	12,575.70
Maxville.....	Feb., 1921	38.4	41,399.16	17,768.56	.....	1,440.48	60,608.20
Prescott.....	Dec., 1913	227.8	59,946.22	62,196.34	3,725.17	26,730.05	152,597.78
Williamsburg.....	April, 1915	17.8	8,156.48	2,624.51	1,182.39	1,149.72	13,113.10
Winchester.....	Jan., 1914	87.9	34,960.72	13,391.07	1,544.18	18,169.52	68,065.49
Rural districts not included in above.....			48,722.94	.....	.....	1,853.57	50,576.51
Companies not included in above.....			241,784.98	.....	.....	17,906.47	259,691.45
Plant for construction for municipal service.....			71,978.69	.....	.....	.....	71,978.69
Less renewals, expenses and adjustments.....			.....	.....	.....	241,602.76 5,047.53	1,667,226.94 5,047.53
Totals—Municipalities, Rural Districts and Companies.....		1,876.6	1,035,262.08	379,781.73	10,580.37	236,555.23	1,662,179.41
TOTAL ASSETS.....							\$1,662,179.4
RIDEAU							
Carleton Place.....	May, 1919	791.9	\$ 337,317.97	\$ 64,535.44	\$ 4,919.88	\$ 25,609.42	\$ 432,382.71
Kemptville.....	Sept., 1921	91.7	52,489.88	25,342.05	2,605.65	5,262.92	85,700.50
Lennoxville.....	Sept., 1921	32.4	23,078.67	7,128.20	305.42	1,812.28	32,324.57
Perth.....	Feb., 1919	499.	218,670.18	104,672.63	15,250.32	30,978.60	369,571.73
Smiths Falls.....	Sept., 1918	844.8	312,199.47	196,571.35	3,120.78	28,204.48	540,096.08
Companies not included in above.....			136,623.18	.....	.....	2,121.20	138,744.38
Add renewals adjustments.....			.....	.....	.....	93,988.90 3,142.24	1,598,819.97 3,142.21
Totals—Municipalities and Companies.....		2,259.8	1,080,379.35	398,249.67	26,202.05	97,131.14	1,601,962.21
TOTAL ASSETS.....							\$1,601,962.21

PLANT AND RESERVES WITH THE ASSETS, LIABILITIES AND RESERVES
AS AT 31st DECEMBER, 1922—Continued

LIABILITIES				RESERVES AND SURPLUSES			
Municipalities' proportionate share of Hydro-Electric Power Commission's debt to the Province	Municipal debenture balances	Accounts payable and other liabilities (municipalities only)	Total liabilities	Debentures paid sinking fund and other reserves	Plant renewal reserves	Surplus	Total reserves and surpluses
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
115,671.74	39,785.00	5,333.01	160,789.75	3,955.09	4,309.49	*3,474.45	4,790.13
11,254.04	4,864.08	1,867.74	17,985.86	135.92	382.18	*376.01	142.09
288,408.66	125,827.82	72,711.68	486,948.16	135,718.42	40,042.90	*18,480.82	157,280.50
68,995.70	5,081.94	6,372.26	80,449.90	5,121.57	12,904.14	2,346.48	20,372.19
37,607.89	9,242.42	3,738.69	50,589.00	728.00	1,261.30	*3,316.86	*1,327.56
6,374.86	5,664.01	.....	12,038.87	335.99	239.15	*38.31	536.83
41,399.16	15,057.02	3,954.52	60,410.70	942.98	1,607.23	*2,352.71	197.50
59,946.22	17,128.63	2,836.37	79,911.22	12,279.64	25,403.45	35,003.47	72,686.56
8,156.48	1,955.75	.....	10,112.23	980.43	1,619.26	401.18	3,000.87
34,960.72	9,318.54	3,568.00	47,847.26	3,079.38	9,506.00	7,632.85	20,218.23
48,722.94	.....	.....	48,722.94	787.25	1,066.32	.....	1,853.57
241,784.98	.....	.....	241,784.98	8,185.91	9,720.56	.....	17,906.47
71,978.69	.....	.....	71,978.69	.....	.....	.....	.....
Less renewals, expenses and adjustments	.....	.....	.....	.....	108,061.98	.....	297,657.38
.....	.....	.....	.....	.....	5,047.53	.....	5,047.53
1,035,262.08	233,925.21	100,382.27	1,369,569.56	172,250.58	103,014.45	17,344.82	292,609.85
Liabilities	.....	.....	.....	.....	.....	.....	1,369,569.56
TOTAL LIABILITIES, RESERVES AND SURPLUSES							\$1,662,179.41

SYSTEM

\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
337,317.97	63,786.65	3,815.81	404,920.43	2,213.35	16,752.43	8,496.50	27,462.28
52,489.88	24,348.59	1,816.22	78,654.69	651.41	950.00	5,444.40	7,045.81
23,078.67	7,316.81	.....	30,395.48	244.66	389.07	1,295.36	1,929.09
218,670.18	104,154.77	3,261.26	326,086.21	4,245.23	19,032.65	20,207.64	43,485.52
312,199.47	172,558.23	10,000.00	494,757.70	25,066.77	33,341.84	*13,070.23	45,338.38
136,623.18	.....	.....	136,623.18	.....	2,121.20	.....	2,121.20
Add renewals adjustments	.....	.....	.....	.....	72,587.19	.....	127,382.28
.....	.....	.....	.....	.....	3,142.24	.....	3,142.24
1,080,379.35	372,165.05	18,893.29	1,471,437.69	32,421.42	75,729.43	22,373.67	130,524.52
Liabilities	.....	.....	.....	.....	.....	.....	1,471,437.69
TOTAL LIABILITIES, RESERVES AND SURPLUSES							\$1,601,962.21

*Denotes deficit

STATEMENT

Condensed Operating Reports of Electrical Departments

NIAGARA

Municipality	Popu- lation	Cost of power purchased	Cost of operation and main- tenance	Debenture charges and interest	Total cost of operation	Revenue	Gross surplus
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Acton.....	1,742	9,077.58	3,195.20	415.03	12,687.81	15,887.50	3,199.69
Ailsa Craig.....	547	5,850.66	305.56	340.61	6,496.83	8,676.31	2,179.48
Alvinston.....	659	3,573.85	343.54	1,268.88	5,186.27	4,923.28	.....
Ancaster Twp.....	.....	3,776.11	2,977.73	1,691.26	8,445.10	10,773.11	2,328.01
Aylmer.....	2,251	9,501.66	3,910.61	2,005.04	15,417.31	20,374.60	4,957.29
Ayr.....	817	3,610.17	715.50	937.08	5,262.75	6,666.27	1,403.52
Baden.....	P.V.	7,522.57	602.53	141.26	8,266.36	8,617.78	351.42
Beachville.....	P.V.	9,604.82	601.75	130.40	10,336.97	10,710.34	373.37
Blenheim.....	1,580	8,301.63	2,808.74	1,158.55	12,268.92	15,466.47	3,197.55
Bolton.....	658	5,926.65	877.35	1,395.87	8,199.87	8,626.09	426.22
Bothwell.....	613	6,423.32	768.12	1,099.21	8,290.65	11,325.05	3,034.40
Brampton.....	4,407	28,976.83	5,433.01	2,937.38	37,347.22	41,042.73	3,695.51
Brantford.....	31,362	131,352.24	40,204.17	31,853.35	203,409.76	208,975.03	5,565.27
Brantford Twp.....	.....	8,791.51	5,698.41	4,447.72	18,937.64	20,025.11	1,087.47
Brigden.....	P.V.	3,731.60	620.06	915.69	5,267.35	5,649.10	381.75
Burford.....	P.V.	3,664.61	924.48	496.17	5,085.26	7,505.52	2,420.26
Burgessville.....	P.V.	1,491.85	315.21	279.88	2,086.94	2,007.23	.....
Caledonia.....	1,335	2,837.70	912.55	388.94	4,139.19	4,882.06	742.87
Chatham.....	15,084	86,824.32	50,380.09	21,923.89	159,128.30	178,182.12	19,053.82
Chippawa.....	1,029	2,195.85	1,015.23	1,326.43	4,537.51	6,912.22	2,374.71
Clinton.....	1,941	8,598.18	2,838.68	2,924.25	14,361.11	16,557.08	2,195.97
Comber.....	P.V.	4,612.97	818.20	769.65	6,200.82	8,435.88	2,235.06
Dashwood.....	P.V.	2,884.10	285.30	236.36	3,405.76	3,367.49	.....
Delaware.....	P.V.	823.57	77.80	227.81	1,129.18	1,871.43	742.25
Dereham Twp.....	.....	2,738.53	1,137.14	4,105.14	7,980.81	8,231.63	250.82
Dorchester.....	P.V.	1,177.39	477.94	259.63	1,914.96	4,027.78	2,112.82
Drayton.....	618	3,399.39	381.73	600.72	4,381.84	6,313.95	1,932.11
Dresden.....	1,456	6,244.68	3,110.54	1,211.67	10,566.89	12,722.31	2,155.42
Drumbo.....	P.V.	1,241.56	286.88	248.65	1,777.09	2,650.40	873.31
Dublin.....	P.V.	1,975.25	247.80	564.23	2,787.28	2,966.36	179.08
Dundas.....	5,100	27,801.01	11,091.89	3,364.41	42,257.31	48,092.58	5,835.27
Dunnville.....	3,583	10,504.53	4,921.78	5,071.30	20,497.61	25,701.03	5,203.42
Dutton.....	845	4,775.70	1,259.14	425.91	6,460.75	7,525.56	1,064.81
Elmira.....	2,370	14,397.61	3,548.42	1,358.68	19,304.71	24,351.20	5,046.49
Elora.....	1,091	9,385.88	3,134.82	990.78	13,511.48	16,109.90	2,598.42
Embro.....	463	3,222.05	395.14	689.02	4,306.21	5,550.44	1,244.23
Etobicoke Twp.....	.....	15,782.96	8,445.90	7,758.28	31,987.14	43,410.99	11,423.85
Exeter.....	1,507	11,135.67	2,145.24	1,133.43	14,414.34	15,980.73	1,566.39
Fergus.....	1,762	8,705.62	3,799.43	1,680.86	14,185.91	17,359.71	3,173.80
Ford City.....	5,113	15,554.17	2,099.81	.....	17,653.98	17,059.17	.....
Forest.....	1,422	7,066.40	2,801.47	2,426.79	12,294.66	16,608.35	4,313.69
Galt.....	13,332	108,097.51	27,588.30	30,753.02	166,438.83	163,260.54	.....
Georgetown.....	2,098	19,311.15	4,148.31	1,215.81	24,675.27	30,091.14	5,415.87
Glencoe.....	835	4,618.41	1,385.03	2,614.22	8,617.66	11,310.01	2,692.35
Goderich.....	4,108	25,998.65	7,450.15	4,951.66	38,400.46	41,332.32	2,931.86

" B "

of Hydro Municipalities for Year Ended December 31, 1922

SYSTEM

Gross deficit	Depreciation	Net surplus	Net deficit	Number of consumers					Per cent of consumers to population	Horse-power taken in Dec., 1922
				Dom. light	Com'l light	Po- wer	Rural	Total		
\$ c.	\$ c.	\$ c.	\$ c.							
.....	924.00	2,275.69	.....	351	64	16	.....	431	24.7	326.3
.....	297.00	1,882.48	.....	98	32	3	1	134	24.5	123.3
262.99	.....	.....	262.99	128	51	4	.....	183	27.7	89.9
.....	697.00	1,631.01	.....	467	39	4	.....	510	.....	.....
.....	654.00	4,303.29	.....	465	118	9	.....	592	26.3	292.2
.....	327.00	1,076.52	.....	129	47	4	.....	180	22.	100.5
.....	261.00	90.42	.....	86	24	4	.....	114	.....	228.0
.....	366.00	7.37	.....	74	25	3	.....	102	.....	292.7
.....	726.00	2,471.55	.....	406	98	11	.....	515	32.6	193.7
.....	554.00	.....	127.78	119	40	8	.....	167	25.4	144.8
.....	196.00	2,838.40	.....	143	48	15	.....	206	33.6	151.5
.....	1,232.00	2,463.51	.....	1,020	193	43	13	1,269	28.8	1,212.1
.....	13,034.14	.....	7,468.87	4,861	556	84	.....	5,501	17.5	4,530.0
.....	1,330.00	.....	242.53	492	36	5	.....	533	.....	.....
.....	203.00	178.75	.....	78	37	3	.....	118	.....	81.0
.....	238.00	2,182.26	.....	139	42	5	.....	186	.....	74.0
79.71	111.00	.....	190.71	49	12	1	.....	62	.....	46.3
.....	238.00	504.87	.....	91	60	7	.....	158	11.8	117.2
.....	7,327.00	11,726.82	.....	3,540	745	131	.....	4,416	29.2	3,246.4
.....	364.00	2,010.71	.....	172	34	3	.....	209	20.3	79.0
.....	1,077.00	1,118.97	.....	388	131	11	.....	530	27.3	218.5
.....	227.00	2,008.06	.....	74	42	2	.....	118	.....	96.5
38.27	103.00	.....	141.27	46	24	2	.....	72	.....	43.9
.....	94.00	648.25	.....	45	7	.....	.....	52	.....	17.4
.....	1,235.00	.....	984.18	.....	.....	.....	178	178	.....	71.0
.....	193.00	1,919.82	.....	109	16	4	.....	129	.....	29.5
.....	256.00	1,676.11	.....	117	33	2	.....	152	24.6	59.0
.....	517.00	1,638.42	.....	273	113	13	.....	399	27.4	225.2
.....	131.00	742.31	.....	76	21	1	.....	98	.....	40.2
.....	147.00	32.08	.....	20	22	3	.....	45	.....	28.1
.....	1,045.00	4,790.27	.....	942	170	53	44	1,209	23.7	1,425.2
.....	1,637.00	3,566.42	.....	290	157	18	.....	465	12.9	388.7
.....	337.00	727.81	.....	172	73	4	.....	249	29.4	131.3
.....	958.00	4,088.49	.....	383	98	21	.....	502	21.1	420.6
.....	675.00	1,923.42	.....	242	70	3	4	319	29.2	283.0
.....	269.00	975.23	.....	81	31	3	.....	115	24.8	34.5
.....	3,842.00	7,581.85	.....	2,166	130	14	.....	2,310	.....	689.0
.....	603.00	963.39	.....	303	92	8	1	404	26.8	227.8
.....	803.00	2,370.80	.....	386	59	15	.....	460	25.7	335.0
594.81	.....	.....	594.81	912	112	23	.....	1,047	20.5	.....
.....	739.00	3,574.69	.....	370	102	20	5	497	34.9	127.8
3,178.29	11,210.97	.....	14,389.26	3,092	442	118	.....	3,652	27.4	4,311.0
.....	1,416.00	3,999.87	.....	498	116	29	7	650	30.9	646.3
.....	453.00	2,239.35	.....	172	65	4	.....	241	28.9	83.0
.....	2,629.00	302.86	.....	894	187	14	22	1,117	27.1	517.4

STATEMENT

Condensed Operating Reports of Electrical Departments

NIAGARA

Municipality	Population	Cost of power purchased	Cost of operation and maintenance	Debenture charges and interest	Total cost of operation	Revenue	Gross surplus
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Grantham Twp..	.....	1,890.02	1,547.81	3,178.44	6,616.27	7,695.24	1,078.97
Granton.....	P.V.	2,328.48	239.74	249.61	2,817.83	3,834.65	1,016.82
Guelph.....	18,027	120,896.87	33,049.00	8,348.89	162,294.76	183,566.02	21,271.26
Hagersville.....	1,271	13,401.89	3,370.33	438.20	17,210.42	20,677.07	3,466.65
Hamilton.....	118,243	453,911.63	169,142.24	93,918.72	716,972.59	729,312.78	12,340.19
Harriston.....	1,311	9,605.19	1,824.41	1,169.30	12,598.90	14,307.27	1,708.37
Hensall.....	738	4,080.84	929.58	868.99	5,879.41	6,077.69	198.28
Hespeler.....	2,853	13,394.11	5,416.62	2,107.02	20,917.75	23,569.30	2,651.55
Highgate.....	417	2,486.69	297.56	306.10	3,090.35	4,302.07	1,211.72
Ingersoll.....	5,253	33,201.74	11,495.62	3,742.67	48,440.03	52,363.63	3,923.60
Kitchener.....	22,717	201,539.40	53,860.56	18,406.40	273,806.36	275,465.30	1,658.94
Lambeth.....	P.V.	1,225.49	418.51	292.56	1,936.56	3,343.42	1,406.86
Listowel.....	2,429	15,574.70	5,976.73	3,827.58	25,379.01	30,103.93	4,724.92
London.....	59,784	407,081.33	156,118.98	75,748.88	638,949.19	657,244.53	18,295.34
Louth Twp.....	.....	.....	261.02	526.22	787.24	808.76	21.52
Lucan.....	624	6,681.53	1,797.63	506.03	8,985.19	10,695.46	1,710.27
Lynden.....	P.V.	4,351.23	230.99	300.85	4,883.07	5,658.19	775.12
Markham.....	970	3,195.54	1,816.70	1,179.86	6,192.10	8,904.96	2,712.86
Merritton.....	2,589	4,784.89	5,025.00	774.19	10,584.08	12,861.15	2,277.07
Milton.....	1,900	27,855.10	3,133.25	1,174.76	32,163.11	30,175.81	.....
Milverton.....	1,054	12,386.18	1,486.05	696.57	14,568.80	15,419.11	850.31
Mimico.....	4,187	17,497.91	7,301.71	2,243.85	27,043.47	27,065.22	21.75
Mitchell.....	1,699	8,313.19	3,068.78	1,206.03	12,588.00	17,333.53	4,745.53
Moorefield.....	P.V.	2,308.28	187.38	379.61	2,875.27	3,131.63	256.36
Mount Brydges.....	P.V.	1,762.37	258.62	232.70	2,253.69	3,190.45	936.76
Newbury.....	301	1,370.14	206.57	1,301.80	2,878.51	2,926.42	47.91
New Hamburg.....	1,401	9,485.86	3,071.50	1,181.07	13,738.43	15,270.77	1,532.34
New Toronto.....	2,947	55,301.30	9,442.44	177.90	64,921.64	59,083.53	.....
Niagara Falls.....	15,895	81,658.93	42,733.95	27,720.45	152,113.33	157,845.64	5,732.31
Niagara-on-the-Lake.....	1,714	4,767.05	4,389.59	1,491.48	10,648.12	13,564.19	2,916.07
Norwich.....	1,307	9,792.37	9,456.40	487.04	19,735.81	23,231.46	3,495.65
Oil Springs.....	491	8,308.45	1,720.30	1,545.69	11,574.44	15,322.40	3,747.96
Otterville.....	P.V.	1,944.01	597.80	260.99	2,802.80	3,882.24	1,079.44
Palmerston.....	1,780	8,734.65	2,764.91	1,376.38	12,875.94	17,120.53	4,244.59
Paris.....	4,400	21,786.10	7,364.96	6,572.84	35,723.90	38,655.21	2,931.31
Parkhill.....	1,201	4,031.83	569.20	1,016.61	5,617.64	8,729.21	3,111.57
Petrolia.....	2,911	21,622.31	7,152.27	3,394.07	32,168.65	38,392.56	6,223.91
Plattsville.....	P.V.	2,672.45	247.62	375.59	3,295.66	2,855.14	.....
Port Colborne.....	3,123	12,157.82	5,323.56	4,803.72	22,285.10	24,878.37	2,593.27
Port Credit.....	1,119	5,490.20	1,004.84	407.83	6,902.87	8,654.76	1,751.89
Port Dalhousie.....	1,424	4,922.70	2,591.48	1,445.42	8,959.60	11,861.41	2,901.81
Port Dover.....	1,380	3,754.92	619.69	2,083.92	6,458.53	7,590.14	1,131.61
Port Stanley.....	717	9,449.46	2,952.61	1,203.09	13,605.16	16,735.46	3,130.30
Preston.....	5,547	48,806.29	14,106.05	9,039.02	71,951.36	72,533.11	581.75
Princeton.....	P.V.	1,480.78	248.93	245.59	1,975.30	2,396.55	421.25

" B "—Continued

of Hydro Municipalities for Year Ended December 31, 1922

SYSTEM—Continued

Gross deficit	Depreciation	Net surplus	Net deficit	Number of consumers					Per cent of consumers to population	Horse-power taken in Dec., 1922
				Dom. light	Com'l light	Power	Rural	Total		
\$ c.	\$ c.	\$ c.	\$ c.							
937.10	141.87						249	249		43.8
133.00	883.82			63	23	2		88		65.6
9,442.00	11,829.26			3,610	601	103		4,314	23.9	5,361.9
425.00	3,041.65			203	88	12		303	23.8	550.5
37,345.31		25,005.12	21620	2,243	678	968		25,509	21.5	23,271.0
477.00	1,231.37		232	79	9			320	24.4	215.0
325.00		126.72	135	45	10	2		192	26.0	75.3
1,467.00	1,184.55		545	103	19			667	23.4	568.3
176.00	1,035.72		69	32	5			106	25.4	107.4
2,524.00	1,399.60		1,090	232	52			1,374	26.1	1,465.0
14,738.11		13,079.17	4,297	663	212			5,172	22.7	8,230.5
160.00	1,246.86		103	22	2			127		56.5
1,294.00	3,430.92		495	141	19			655	26.9	465.0
43,801.43		25,506.09	13993	1,872	490			16,355	27.3	17,239.4
85.00		63.48					56	56		
373.00	1,337.27		150	38	9	1		198	31.7	149.0
141.00	634.12		66	15	1			82		71.8
330.00	2,382.86		189	45	6			240	24.7	82.0
549.00	1,728.07		623	58	5			686	26.5	315.0
1,987.30	383.00	2,370.30	314	79	18			411	21.6	951.8
409.00	441.31		182	62	6			250	23.7	376.0
1,790.00		1,768.25	1,036	85	9			1,130	27.0	841.8
1,467.00	3,278.53		362	104	21			487	28.6	238.9
108.00	148.36		31	19	2			52		50.5
142.00	794.76		89	24	1			114		29.0
166.00		118.09	43	20	1			64	21.2	21.4
382.00	1,150.34		222	78	13			313	22.3	324.4
5,838.11	1,624.00	7,462.11	761	87	15			863	29.3	2,444.1
7,448.00		1,715.69	3,163	542	93			3,798	23.9	4,892.8
448.00	2,468.07		319	77	7			403	23.5	200.6
1,706.00	1,789.65		330	92	8	170		600	*	333.7
400.00	3,347.96		48	21	35			104	21.2	286.5
180.00	899.44		85	20	4			109		39.4
672.00	3,572.59		277	80	6			363	20.4	230.5
2,825.00	106.31		882	170	17	2		1,071	24.3	1,015.5
388.00	2,723.57		152	63	4			219	18.2	69.7
1,650.00	4,573.91		531	192	68			791	27.1	676.8
440.52	161.00	601.52	75	28	2			105		29.5
1,093.00	1,500.27		608	155	13			776	24.8	524.0
203.00	1,548.89		241	46	6			293	26.2	194.3
467.00	2,434.81		411	33	8	58		510		166.2
527.00	604.61		156	77	3			236	17.1	75.0
798.00	2,332.30		508	67	12			587	**	100.5
3,922.00		3,340.25	1,149	203	53	15		1,420	25.6	2,008.4
98.00	323.25		57	10				67		22.7

*Includes rural consumers in N. & S. Norwich Townships.

**Total includes summer consumers.

STATEMENT

Condensed Operating Reports of Electrical Departments

NIAGARA

Municipality	Population	Cost of power purchased	Cost of operation and maintenance	Debenture charges and interest	Total cost of operation	Revenue	Gross surplus
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Queenston.....	P.V.	803.00	363.01	830.88	1,996.89	2,404.02	407.13
Ridgetown.....	2,267	8,818.85	3,493.19	1,218.67	13,530.71	18,133.00	4,602.29
Riverside.....	3,000	2,848.49	1,118.28	.....	3,966.77	3,930.61	.....
Rockwood.....	P.V.	2,593.52	634.28	54.59	3,282.39	4,712.87	1,430.48
Rodney.....	756	3,026.40	569.07	480.58	4,076.05	5,651.98	1,575.93
St. Catharines...	20,961	91,162.89	40,602.29	19,180.90	150,946.08	156,972.31	6,026.23
St. Clair Beach..	82	639.99	81.03	.....	721.02	684.91	.....
St. George.....	P.V.	2,623.33	680.73	128.92	3,432.98	5,081.17	1,648.19
St. Jacobs.....	P.V.	2,123.77	395.49	338.89	2,858.15	3,331.90	473.75
St. Marys.....	4,039	29,892.70	7,987.14	5,253.34	43,133.18	47,591.43	4,458.25
St. Thomas.....	17,892	84,689.06	47,614.42	5,107.51	137,410.99	150,661.49	13,250.50
Sarnia.....	14,905	113,844.26	38,812.78	25,833.00	178,490.04	198,856.82	20,366.78
Scarboro Twp....	.....	9,742.20	7,834.18	6,600.56	24,176.94	33,597.69	9,420.75
Seaforth.....	1,950	14,096.09	4,107.32	1,072.41	19,275.82	20,731.48	1,455.66
Simcoe.....	3,951	10,185.70	3,963.07	2,284.50	16,433.27	18,833.34	2,400.07
Springfield.....	432	1,466.83	526.91	667.42	2,661.16	3,307.32	646.16
Stamford Twp....	.....	10,223.48	9,111.99	7,307.21	26,642.68	30,746.54	4,103.86
Stratford.....	17,611	91,578.37	27,742.81	17,924.77	137,245.95	146,231.30	8,985.35
Strathroy.....	2,627	17,374.34	5,246.27	2,746.56	25,367.17	32,067.66	6,700.49
Tavistock.....	1,003	9,659.95	1,222.94	115.26	10,998.15	12,615.52	1,617.37
Tecumseh.....	1,019	1,606.21	838.85	592.08	3,037.14	1,942.25	.....
Thamesford.....	P.V.	4,498.92	577.03	474.22	5,550.17	7,234.23	1,684.06
Thamesville.....	817	3,633.36	890.19	750.07	5,273.62	9,521.58	4,247.96
Thedford.....	583	2,075.89	307.31	667.02	3,050.22	3,054.89	4.67
Thorndale.....	P.V.	2,898.67	333.04	325.60	3,557.31	4,031.36	474.05
Thorold.....	3,536	8,991.93	7,599.87	5.91	16,597.71	21,941.34	5,343.63
Tilbury.....	1,851	7,582.21	1,566.14	1,151.53	10,299.88	16,113.07	5,813.19
Tillsonburg.....	3,027	15,610.84	5,834.37	2,232.00	23,677.21	28,513.17	4,835.96
Toronto.....	522,942	185,426.16	123,458.75	738,690.63	382,7508.54	433,9009.86	511,501.32
Toronto Twp....	.....	8,862.66	4,817.36	871.33	14,551.35	27,068.08	12,516.73
Vaughan Twp....	.....	2,194.70	531.82	2,614.49	5,341.01	5,452.60	111.59
Walkerville.....	7,303	147,552.26	43,676.01	20,142.98	211,371.25	224,826.61	13,455.36
Wallaceburg.....	3,921	28,465.30	9,957.43	4,189.67	42,612.40	54,964.01	12,351.61
Wardville.....	212	1,001.46	103.75	671.13	1,776.34	2,047.06	270.72
Waterdown.....	815	4,915.44	1,625.17	1,376.60	7,917.21	8,933.76	1,016.55
Waterford.....	1,112	5,991.82	2,301.20	.....	8,293.02	10,542.42	2,249.40
Waterloo.....	5,976	41,609.43	12,849.16	7,985.39	62,443.98	68,121.82	5,677.84
Watford.....	1,039	4,847.36	1,071.89	860.08	6,779.33	10,831.34	4,052.01
Welland.....	8,880	45,149.19	17,513.01	19,800.56	82,462.76	78,006.41	.....
Wellesley.....	P.V.	5,852.66	873.10	540.40	7,266.16	6,945.07	.....
West Lorne.....	803	7,003.42	920.09	360.53	8,284.04	10,780.11	2,496.07
Weston.....	3,299	36,582.35	9,026.64	1,377.54	46,986.53	50,411.23	3,424.70
Windsor.....	38,530	288,794.12	146,599.71	66,016.20	501,410.03	574,838.66	73,428.63
Woodbridge.....	679	4,612.47	970.72	263.04	5,846.23	7,243.78	1,397.55
Woodstock.....	10,164	58,480.15	21,159.11	4,758.83	84,398.09	92,833.48	8,435.39
Wyoming.....	489	2,409.63	653.83	941.51	4,004.97	4,504.40	499.43
Zurich.....	P.V.	3,517.11	437.91	156.99	4,112.01	5,267.71	1,155.70
Total.....	1145353	5456782.63	2530996.83	1413651.75	9401431.21	10407875.83	1024809.22

*Police Villages taken as 500 population and Townships as 2,000 population.

"B"—Continued

of Hydro Municipalities for Year Ended December 31, 1922

SYSTEM—Continued

Gross deficit	Depreciation	Net surplus	Net deficit	Number of consumers					Percent of consumers to population	Horse-power taken in Dec., 1922
				Dom. light	Com'l light	Pow-er	Rural	Total		
\$ c.	\$ c.	\$ c.	\$ c.							
.....	167.00	240.13	.....	55	7	2	.....	64	.....	31.5
.....	654.00	3,948.29	.....	391	128	11	.....	530	23.4	284.0
36.16	.....	.....	36.16	376	14	2	.....	392	13.1	.....
.....	276.00	1,154.48	.....	118	17	4	.....	139	.....	59.0
.....	266.00	1,309.93	.....	131	60	4	.....	195	25.8	64.3
.....	9,297.00	.....	3,270.77	4,341	398	93	.....	4,832	23.0	5,020.0
36.11	.....	.....	36.11	23	2	1	.....	26	31.7	.....
.....	177.00	1,471.19	.....	96	27	4	1	128	.....	73.7
.....	160.00	313.75	.....	70	23	2	.....	95	.....	40.2
.....	2,914.47	1,543.78	.....	839	198	41	.....	1,078	26.6	707.7
.....	9,325.00	3,925.50	.....	3,744	574	116	6	4,440	24.2	3,280.0
.....	9,662.00	10,704.78	.....	3,928	565	86	.....	4,579	30.7	3,800.3
.....	2,195.00	7,225.75	.....	1,363	58	12	.....	1,433	.....	384.5
.....	1,445.00	10.66	.....	479	116	11	.....	606	31.1	560.0
.....	1,326.00	1,074.07	.....	277	181	24	.....	482	12.2	399.4
.....	.....	646.16	.....	64	24	3	.....	91	21.0	23.7
.....	1,748.00	2,355.86	.....	751	16	14	.....	781	.....	630.0
.....	11,188.00	.....	2,202.65	3,652	477	157	107	4,393	24.9	3,606.0
.....	1,631.00	5,069.49	.....	617	164	23	.....	804	30.6	492.0
.....	334.00	1,283.37	.....	201	62	4	.....	267	26.6	152.8
1,094.89	.....	.....	1,094.89	279	32	1	.....	312	30.6	.....
.....	252.00	1,432.06	.....	85	26	4	.....	115	.....	105.9
.....	356.00	3,891.96	.....	181	72	5	.....	258	31.6	84.4
.....	.....	4.67	.....	100	33	1	.....	134	23.0	59.5
.....	124.00	350.05	.....	55	25	1	.....	81	.....	56.2
.....	1,687.00	3,656.63	.....	985	172	5	.....	1,162	32.9	588.4
.....	427.00	5,386.19	.....	220	88	10	.....	318	17.2	259.1
.....	1,020.00	3,815.96	.....	566	196	22	.....	784	25.9	435.0
.....	279,459.94	232,041.38	.....	76,985	13,684	2,659	.....	93,328	17.8	98,173.0
.....	2,507.00	10,009.73	.....	.....	.....	.....	809	809	.....	398.0
.....	720.00	.....	608.41	53	13	4	13	83	.....	.....
.....	5,044.00	8,411.36	.....	1,486	241	77	.....	1,804	24.7	5,343.4
.....	1,746.00	10,605.61	.....	737	181	31	.....	949	24.2	669.0
.....	120.00	150.72	.....	41	15	.....	.....	56	26.4	13.6
.....	591.00	425.55	.....	148	31	3	.....	182	22.3	140.2
.....	665.00	1,584.40	.....	229	55	9	15	308	27.7	227.4
.....	4,961.73	716.11	.....	1,181	178	52	19	1,430	23.9	1,586.0
.....	362.00	3,690.01	.....	201	76	9	.....	286	27.5	100.8
4,456.35	6,322.00	.....	10,778.35	1,325	213	51	.....	1,589	17.9	2,219.9
321.09	218.00	.....	539.09	88	35	5	.....	128	.....	142.9
.....	283.00	2,213.07	.....	115	55	3	.....	173	.....	202.4
.....	2,546.00	878.70	.....	1,150	130	16	.....	1,296	39.3	1,644.0
.....	20,004.00	53,424.63	.....	10,430	1,472	321	.....	12,223	31.7	9,678.3
.....	403.00	994.55	.....	137	42	5	1	185	27.2	224.7
.....	6,414.00	2,021.39	.....	2,209	423	79	.....	2,711	26.7	2,520.0
.....	246.00	253.43	.....	94	39	2	.....	135	27.6	40.8
.....	167.00	988.70	.....	63	42	3	2	110	.....	84.6
18,364.60	600,114.20	530,456.04	124,125.62	205,133	34,028	6,799	2,769	248,729	.....	240,358.4

STATEMENT

Condensed Operating Reports of Electrical Departments

SEVERN

Municipality	Population	Cost of power purchased	Cost of operation and maintenance	Debenture charges and interest	Total cost of operation	Revenue	Gross surplus
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Alliston.....	1,321	6,105.99	1,768.00	3,586.86	11,460.85	12,762.54	1,301.69
Barrie.....	6,888	25,093.01	10,235.18	3,476.93	38,805.12	47,852.95	9,047.83
Beeton.....	586	5,354.76	316.46	1,149.05	6,820.27	8,559.71	1,739.44
Bradford.....	1,028	4,876.40	825.85	1,477.99	7,180.24	7,721.38	541.14
Coldwater.....	647	2,738.94	672.53	511.56	3,923.03	6,566.21	2,643.18
Collingwood....	6,237	42,013.01	7,049.78	1,680.63	50,743.42	61,229.86	10,486.44
Cookstown.....	P.V.	2,185.33	483.64	925.62	3,594.59	5,056.65	1,462.06
Creemore.....	540	3,125.57	282.10	415.94	3,823.61	5,624.20	1,800.59
Elmvale.....	P.V.	4,666.77	1,164.94	321.63	6,153.34	7,618.25	1,464.91
Midland.....	7,022	36,557.58	8,981.82	5,368.05	50,907.45	68,651.83	17,744.38
Penetang.....	3,920	18,990.08	4,890.16	2,019.54	25,899.78	35,599.45	7,699.67
Port McNicoll...	576	1,108.48	323.14	760.27	2,191.89	3,658.26	1,466.37
Stayner.....	1,004	4,523.72	710.80	1,037.09	6,271.61	8,579.12	2,307.51
Thornton.....	P.V.	1,094.43	113.36	725.95	1,933.74	1,826.49	.....
Tottenham.....	512	3,492.24	469.83	1,338.80	5,300.87	5,765.40	464.53
Victoria Harbour	1,485	1,821.92	598.68	475.55	2,896.15	4,383.49	1,487.34
Waubashene....	P.V.	913.50	346.65	285.88	1,546.03	2,514.30	968.27
Total.....	33,766	164,661.73	39,232.92	25,557.34	229,451.99	291,970.09	62,625.35

EUGENIA

Arthur.....	1,222	8,893.10	932.97	2,089.72	11,915.79	11,572.44	.....
Chatsworth.....	287	1,580.76	280.10	532.20	2,393.06	2,992.31	599.25
Chesley.....	1,803	12,013.39	1,488.85	2,426.43	15,928.67	20,795.56	4,866.89
Dundalk.....	725	3,614.71	463.14	420.46	4,498.31	7,061.89	2,563.58
Durham.....	1,622	11,867.64	1,666.45	2,641.02	16,175.11	23,306.36	7,131.25
Elmwood.....	P.V.	1,681.31	206.67	648.47	2,536.45	3,207.50	671.05
Flesherton.....	410	2,252.82	402.31	613.47	3,268.60	4,419.13	1,150.53
Grand Valley...	582	3,990.73	421.44	903.69	5,315.86	7,611.92	2,296.06
Hanover.....	2,695	41,083.87	6,837.09	7,286.10	55,207.06	64,650.16	9,443.10
Holstein.....	P.V.	1,238.70	204.45	416.41	1,859.56	1,906.67	47.11
Kincardine.....	2,159	9,929.74	4,528.39	4,787.50	19,245.63	17,063.09	.....
Lucknow.....	887	4,983.99	560.17	1,593.94	7,138.10	8,769.37	1,631.27
Markdale.....	908	2,786.11	782.38	851.73	4,420.22	6,649.43	2,049.21
Mount Forest...	1,761	9,565.82	1,810.22	2,229.37	13,605.41	18,309.63	4,704.22
Neustadt.....	445	7,323.98	411.43	2,013.35	9,748.76	11,331.14	1,582.38
Orangeville.....	2,503	10,886.16	2,314.39	3,250.26	16,450.81	17,580.23	1,129.42
Owen Sound.....	12,360	53,112.06	18,525.17	9,681.42	81,318.65	92,923.84	1,605.19
Priceville.....	P.V.	597.87	45.89	663.91	1,307.67	1,009.05	.....
Ripley.....	P.V.	4,689.78	486.31	1,048.99	6,225.08	5,903.64	.....
Shelburne.....	1,101	6,833.34	778.50	1,750.73	9,362.57	12,065.26	2,702.69
Tara.....	521	3,576.19	698.93	1,521.14	5,796.26	6,664.78	868.52
Teeswater.....	838	5,409.52	572.90	2,860.70	8,843.12	8,360.31	.....
Wingham.....	2,470	15,150.76	4,753.93	6,891.85	26,796.54	30,509.83	3,713.29
Total.....	37,299	223,062.35	49,172.08	57,122.86	329,357.29	384,483.54	58,755.01

“ B ”—Continued

of Hydro Municipalities for Year Ended December 31, 1922

SYSTEM

Gross deficit	Depre- ciation	Net surplus	Net deficit	Number of consumers					Per cent of con- sumers to popu- lation	Horse- power taken in Dec., 1922
				Dom. light	Com'l light	Po- wer	Rural	Total		
\$ c.	\$ c.	\$ c.	\$ c.							
.....	800.00	501.69	.....	271	84	11	4	370	28.0	135.6
.....	2,738.00	6,309.83	.....	1,517	386	29	.....	1,932	28.0	1,128.6
.....	352.00	1,387.44	.....	89	29	3	.....	121	20.6	128.6
.....	452.00	89.14	.....	129	47	2	.....	178	17.3	79.6
.....	356.00	2,287.18	.....	97	46	6	.....	149	23.0	101.2
.....	2,750.00	7,736.44	.....	1,183	248	60	.....	1,491	23.9	1,336.5
.....	302.00	1,160.06	.....	80	25	1	.....	106	.....	32.8
.....	241.00	1,559.59	.....	122	59	6	.....	187	34.6	64.3
.....	350.00	1,114.91	.....	109	59	10	.....	178	.....	205.6
.....	3,785.00	13,959.38	.....	1,163	215	55	.....	1,433	20.4	1,930.3
.....	1,984.00	5,715.67	.....	406	94	30	.....	530	13.5	908.8
.....	202.00	1,264.37	.....	109	30	1	.....	140	24.3	53.0
.....	433.00	1,874.51	.....	176	67	7	.....	250	24.9	149.3
107.25	181.00	.....	288.25	38	10	.....	.....	48	.....	14.0
.....	256.00	208.53	.....	106	52	3	.....	161	31.4	49.5
.....	219.48	1,267.86	.....	116	40	.....	.....	156	10.5	49.0
.....	120.00	848.27	.....	70	17	3	.....	90	.....	17.8
107.25	15,521.48	47,284.87	288.25	5,781	1,508	227	4	7,520	.....	7,729.1

SYSTEM

343.35	597.00	.....	940.35	120	70	5	.....	195	15.9	107.2
.....	144.00	455.25	.....	52	28	1	.....	81	28.0	38.8
.....	732.00	4,134.89	.....	282	92	16	2	392	21.7	300.2
.....	249.00	2,314.58	.....	115	75	3	.....	193	26.6	128.6
.....	667.00	6,464.25	.....	273	89	8	.....	370	22.8	477.6
.....	153.00	518.05	.....	35	19	1	.....	55	.....	33.7
.....	187.00	963.53	.....	88	39	1	.....	128	31.2	41.8
.....	312.00	1,984.06	.....	103	53	2	.....	158	27.2	69.0
.....	1,946.00	7,497.10	.....	523	108	16	.....	647	24.0	1,756.0
.....	74.00	.....	26.89	32	20	1	.....	53	.....	7.7
2,182.54	1,046.00	.....	3,228.54	344	113	12	.....	469	21.7	164.8
.....	366.00	1,265.27	.....	137	66	1	.....	204	23.9	91.0
.....	387.00	1,662.21	.....	147	75	10	2	234	25.7	108.5
.....	746.00	3,958.22	.....	260	130	7	.....	397	22.5	256.0
.....	371.00	1,211.38	.....	61	30	4	.....	95	21.3	182.9
.....	866.00	263.42	.....	265	101	12	.....	378	15.1	214.0
.....	4,109.56	7,495.63	.....	2,285	460	115	.....	2,860	23.1	1,852.5
298.62	111.00	.....	409.62	18	8	.....	.....	26	.....	11.0
321.44	247.00	.....	568.44	64	44	1	1	110	.....	89.8
.....	559.00	2,143.69	.....	221	78	9	.....	308	27.9	180.2
.....	335.00	533.52	.....	82	37	5	2	126	24.2	38.8
482.81	398.00	.....	880.81	127	47	3	3	180	21.4	134.6
.....	1,612.00	2,101.29	.....	384	156	19	.....	559	22.6	308.3
3,628.76	16,214.56	44,966.34	6,054.65	6,018	1,938	252	10	8,218	.....	6,593.0

STATEMENT

Condensed Operating Reports of Electrical Departments

WASDELLS

Municipality	Population	Cost of power purchased	Cost of operation and maintenance	Debenture charges and interest	Total cost of operation	Revenue	Gross surplus
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Beaverton.....	986	5,237.08	1,527.36	1,484.58	8,249.02	12,841.42	4,592.40
Brechin.....	P.V.	2,624.87	420.37	414.91	3,460.15	3,622.16	162.01
Cannington.....	951	3,931.85	1,337.88	1,182.50	6,452.23	9,750.10	3,297.87
Kirkfield.....	P.V.	1,354.09	262.87	581.14	2,198.10	2,494.16	296.06
Port Perry.....	1,162	1,253.40	243.43	342.93	1,839.76	1,756.18	.....
Sunderland.....	P.V.	3,022.36	496.06	1,175.80	4,694.22	6,480.64	1,786.42
Uxbridge.....	1,492	1,280.11	195.77	161.33	1,637.21	1,679.07	41.86
Woodville.....	455	3,595.35	483.68	717.73	4,796.76	7,001.08	2,204.32
Total.....	6,546	22,299.11	4,967.42	6,060.92	33,327.45	45,624.81	12,380.94

MUSKOKA

Gravenhurst....	1,621	6,951.91	4,050.26	3,973.55	14,975.72	19,293.45	4,317.73
Huntsville.....	2,316	23,313.48	4,375.94	1,941.64	29,631.06	29,976.28	345.22
Total.....	3,937	30,265.39	8,426.20	5,915.19	44,606.78	49,269.73	4,662.95

ST. LAWRENCE

Alexandria.....	2,319	13,621.04	2,485.62	4,467.54	20,574.20	19,916.48	.....
Apple Hill.....	P.V.	1,626.59	287.45	478.72	2,392.76	2,129.44	.....
Brockville.....	9,377	50,416.25	28,478.44	18,443.84	97,338.53	114,921.15	17,582.62
Chesterville.....	941	8,835.51	1,134.57	906.96	10,877.04	14,232.97	3,355.93
Lancaster.....	612	3,894.30	366.18	997.61	5,258.09	3,470.49	.....
Martintown....	P.V.	836.55	88.08	498.96	1,423.59	1,530.47	106.88
Maxville.....	785	4,116.69	788.02	1,465.62	6,370.33	6,074.45	.....
Prescott.....	2,723	10,006.86	6,469.68	1,983.39	18,459.93	26,122.50	7,662.57
Williamsburg...	P.V.	1,259.64	252.61	218.93	1,731.18	2,239.46	508.28
Winchester....	1,058	5,013.08	1,614.17	728.70	7,355.95	11,207.11	3,851.16
Total.....	19,315	99,626.51	41,964.82	30,190.27	171,781.60	201,844.52	33,067.44

RIDEAU

Carleton Place..	4,123	29,346.36	8,265.24	2,941.42	40,553.02	46,139.80	5,586.78
Kemptville.....	1,220	5,728.27	1,221.77	1,817.47	8,767.51	14,655.89	5,888.38
Lanark.....	575	2,059.44	268.63	721.62	3,049.69	4,369.75	1,320.06
Perth.....	3,710	19,428.17	5,951.37	6,925.73	32,305.27	42,943.96	10,638.69
Smiths Falls....	6,529	28,633.16	13,900.57	16,296.61	58,830.34	68,288.50	9,458.16
Total.....	16,157	85,195.40	29,607.58	28,702.85	143,505.83	176,397.90	32,892.07

"B"—Continued

of Hydro Municipalities for Year Ended December 31, 1922

SYSTEM

Gross deficit	Depreciation	Net surplus	Net deficit	Number of consumers					Per cent of consumers to population	Horse-power taken in Dec., 1922
				Dom. light	Com'l light	Po- wer	Rural	Total		
\$ c.	\$ c.	\$ c.	\$ c.							
.....	388.00	4,204.40	.....	165	60	14	118	357	36.2	112.6
.....	82.00	80.01	.....	32	23	2	.....	57	.....	61.8
.....	369.00	2,928.87	.....	189	67	10	7	273	28.7	99.0
.....	125.00	171.06	.....	22	15	1	.....	38	.....	29.4
83.58	.....	.....	83.58	192	51	1	.....	244	21.0	80.4
.....	164.00	1,622.42	.....	80	36	2	17	135	.....	72.0
.....	.....	41.86	.....	127	75	8	.....	210	.....	80.4
.....	120.00	2,084.32	.....	87	29	3	14	133	29.2	67.0
83.58	1,248.00	11,132.94	83.58	894	356	41	156	1,447	.....	602.6

SYSTEM

.....	1,443.00	2,874.73	.....	338	78	10	.....	426	26.3	444.3
.....	592.00	.....	246.78	384	98	6	.....	488	21.0	985.5
.....	2,035.00	2,874.73	246.78	722	176	16	.....	914	.....	1,429.8

SYSTEM

1,657.72	633.00	.....	1,290.72	221	88	11	.....	320	13.7	204.7
263.32	95.00	.....	358.32	26	19	1	.....	46	.....	25.4
.....	2,889.00	14,693.62	.....	1,686	374	63	115	2,238	23.8	1,360.6
.....	344.00	3,011.93	.....	151	52	3	.....	206	21.8	106.0
1,787.60	171.00	.....	1,958.60	54	23	.....	.....	77	12.5	24.0
.....	78.00	28.88	.....	25	11	.....	.....	36	.....	13.2
295.88	302.00	.....	597.88	86	58	2	.....	146	18.5	34.8
.....	1,589.00	6,073.57	.....	470	136	21	.....	627	23.0	293.5
.....	78.00	430.28	.....	46	14	1	.....	61	.....	15.2
.....	144.00	3,707.16	.....	230	52	2	.....	284	26.8	110.0
3,004.52	6,323.00	27,945.44	4,205.52	2,995	827	104	115	4,041	.....	2,187.4

SYSTEM

.....	1,318.00	4,268.78	.....	713	160	14	.....	887	21.5	904.4
.....	444.00	5,444.38	.....	206	77	4	.....	287	23.5	126.0
.....	135.00	1,185.06	.....	81	27	2	.....	110	19.1	40.2
.....	1,716.00	8,922.69	.....	645	180	19	.....	844	22.7	572.4
.....	3,687.00	5,771.16	.....	1,276	245	36	18	1,575	24.1	981.2
.....	7,300.00	25,592.07	.....	2,921	689	75	18	3,703	.....	2,624.2

STATEMENT

Condensed Operating Reports of Electrical Departments

THUNDER BAY

Municipality	Population	Cost of power purchased	Cost of operation and maintenance	Debenture charges and interest	Total cost of operation	Revenue	Gross surplus
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Port Arthur....	15,629	241,689.82	57,801.40	38,584.33	338,075.55	357,627.40	19,551.85

OTTAWA

Ottawa.....	112,899	122,937.00	115,353.53	49,602.44	287,892.97	373,615.68	85,722.71
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TRENT

Bloomfield.....	512	2,186.33	375.90	902.99	3,465.22	4,177.36	712.14
Havelock.....	1,258	2,996.55	1,277.94	2,752.62	7,027.11	8,334.57	1,307.46
Kingston.....	22,234	60,727.52	61,561.97	22,399.02	144,688.51	191,860.68	47,172.17
Lakefield.....	1,193	3,536.17	1,267.22	2,406.05	7,209.44	9,640.91	2,431.47
Marmora.....	792	1,435.73	633.30	1,683.20	3,752.23	6,106.86	2,354.63
Norwood.....	748	2,065.71	1,105.76	2,562.20	5,733.67	7,034.42	1,300.75
Omeme.....	485	3,451.83	744.83	1,081.83	5,278.49	7,570.45	2,291.96
Peterboro.....	21,439	98,427.15	44,814.05	19,088.54	162,329.74	186,184.86	23,855.12
Pictou.....	3,263	12,486.60	6,796.27	319.52	19,602.39	38,139.55	18,537.16
Wellington.....	840	3,019.84	685.05	1,543.42	5,248.31	7,158.16	1,909.85
Total.....	52,764	190,333.43	119,262.20	54,739.39	364,335.11	466,207.82	101,872.71

STATEMENT "B"—SUMMARIES

System	Population	Power purchased	Operation and maintenance	Debenture charges and interest	Total operation	Revenue	Gross surplus
Niagara.....	1,145,353	5456782.63	2530996.83	1413651.75	9401431.21	10407875.83	1024809.22
Severn.....	33,766	164,661.73	39,232.92	25,557.34	229,451.99	291,970.09	62,625.35
Eugenia.....	37,299	223,062.35	49,172.08	57,122.86	329,357.29	384,483.54	58,755.01
Wasdells.....	6,546	22,299.11	4,967.42	6,060.92	33,327.45	45,624.81	12,380.94
Muskoka.....	3,937	30,265.39	8,426.20	5,915.19	44,606.78	49,269.73	4,662.95
St. Lawrence...	19,315	99,626.51	41,964.82	30,190.27	171,781.60	201,844.52	33,067.44
Rideau.....	16,157	85,195.40	29,607.58	28,702.85	143,505.83	176,397.90	32,892.07
Thunder Bay...	15,629	241,689.82	57,801.40	38,584.33	338,075.55	357,627.40	19,551.85
Ottawa.....	112,899	122,937.00	115,353.53	49,602.44	287,892.97	373,615.68	85,722.71
Trent.....	52,764	190,333.43	119,262.29	54,739.39	364,335.11	466,207.82	101,872.71
Grand Totals...	1,443,665	6636853.37	2996785.07	1710127.34	11343,765.78	12754917.32	1436340.25

" B "—Concluded

of Hydro Municipalities for Year Ended December 31, 1922

SYSTEM

Gross deficit	Depreciation	Net surplus	Net deficit	Number of consumers					Per cent of consumers to population	Horse-power taken in Dec., 1922
				Dom. light	Com'l light	Po- wer	Rural	Total		
\$ c.	\$ c.	\$ c.	\$ c.							
.....	11,492.00	8,059.85	3,153	630	82	3,865	24.7	12,526.8

SYSTEM

.....	36,743.00	48,979.71	10493	1,415	230	12,138	10.7	11,515.0
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SYSTEM

.....	225.00	487.14	88	19	4	111	21.6	53.6
.....	528.00	779.46	262	62	1	325	25.8	72.3
.....	7,935.00	39,237.17	3,498	787	131	4,416	19.8	3,009.4
.....	520.00	1,911.47	.....	183	66	2	.....	251	21.0	106.0
.....	315.00	2,039.63	.....	110	43	3	.....	156	19.6	45.0
.....	634.00	666.75	.....	161	66	4	.....	231	30.8	107.0
.....	330.00	1,961.96	.....	92	31	7	.....	130	26.8	146.6
.....	7,232.00	16,623.12	.....	4,814	752	127	.....	5,693	26.5	4,528.7
.....	730.00	17,807.16	.....	745	187	36	.....	968	29.6	343.0
.....	374.00	1,535.85	.....	176	53	5	.....	234	.....	85.7
.....	18,823.00	83,049.71	.....	10129	2,066	320	.....	12,515	.....	8,495.3

OF ALL SYSTEMS

Gross deficit	Depreciation	Net surplus	Net deficit	Number of Consumers					Per cent of consumers to population	Horse-power taken in Dec., 1922
				Dom. light	Com'l light	Po- wer	Rural	Total		
18,364.60	600,114.20	530,456.04	124,125.62	205,133	34,028	6,799	2,769	248,729	.....	240,358.4
107.25	15,521.48	47,284.87	288.25	5,781	1,508	227	4	7,520	.....	7,729.1
3,628.76	16,214.56	44,966.34	6,054.65	6,018	1,938	252	10	8,218	.....	6,593.0
83.58	1,248.00	11,132.94	83.58	894	356	41	156	1,447	.....	602.6
.....	2,035.00	2,874.73	246.78	722	176	16	.....	914	.....	1,429.8
3,004.52	6,323.00	27,945.44	4,205.52	2,995	827	104	115	4,041	.....	2,187.4
.....	7,300.00	25,592.07	.....	2,921	689	75	18	3,703	.....	2,624.2
.....	11,492.00	8,059.85	.....	3,153	630	82	.....	3,865	.....	12,526.8
.....	36,743.00	48,979.71	.....	10,493	1,415	230	.....	12,138	.....	11,515.0
.....	18,823.00	83,049.71	.....	10,129	2,066	320	.....	12,515	.....	8,495.3
25,188.71	715,814.24	830,341.70	135,004.40	249,239	43,633	8,146	3,072	303,090	.....	294,061.6

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM

Municipality Population	Acton xa 1,742		Ailsa Craig 547		Alvinston xa 659
Year	1921	1922	1921	1922	1922
EARNINGS					
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	3,650.48	4,374.68	1,402.73	1,557.35	1,586.27
Commercial light.....	2,012.27	2,364.01	722.21	729.78	1,124.49
Commercial power.....	4,965.39	6,189.03	5,297.07	5,532.03	826.70
Municipal power.....	592.92	712.65			
Street light.....	1,841.26	1,848.13	791.00	780.00	1,385.82
Rural.....			85.25	77.15	
Miscellaneous.....		399.00			
Total.....	13,062.32	15,887.50	8,298.26	8,676.31	4,923.28
EXPENSES					
Power purchased.....	7,219.94	9,077.58	5,744.46	5,850.66	3,573.85
Substation operation.....					
Substation maintenance.....					
Distribution system, operation and maintenance.....	1,666.44	1,997.00	45.10	57.90	197.40
Line transformer maintenance.....					
Meter maintenance.....					
Consumers' premises expenses.....					
Street light, operation and maintenance.....	373.43	236.19	69.60	67.42	32.04
Promotion of business.....					
Billing and collecting.....					
Gen. office—salaries and exp..	606.84	861.24	150.01	180.24	114.10
Undistributed expenses.....	426.35	100.77			
Interest.....	112.10	34.32	249.27	184.73	1,015.21
Sinking fund and principal payments on debentures..	379.80	380.71	148.46	155.88	253.67
Total expenses.....	10,784.90	12,687.81	6,406.90	6,496.83	5,186.27
Gross surplus.....	2,277.42	3,199.69	1,891.36	2,179.48	
Gross loss.....					262.99
Depreciation charge.....	916.00	924.00	479.00	297.00	
Net surplus.....	1,361.42	2,275.69	1,412.36	1,882.48	
Net loss.....					262.99

a Eight months operation.

xa Operated by Municipal Council.

xb Hydro and Water Departments under one Commission.

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Ancaster Township xa		Aylmer xb 2,251		Ayr xa 817		Baden, Police Vil. xa		Beachville, P.V. xa	
1921	1922	1921	1922	1921	1922	1921	1922	1921	1922
\$ c. 7,406.62	\$ c. 8,598.01	\$ c. 7,358.00	\$ c. 7,339.17	\$ c. 1,862.55	\$ c. 2,075.16	\$ c. 958.06	\$ c. 1,150.47	\$ c. 786.32	\$ c. 869.79
891.37	993.66	6,238.14	6,422.18	1,319.32	1,281.59	456.15	440.60	433.10	630.79
130.13	293.44	3,177.35	3,068.01	2,546.21	2,217.52	5,967.22	6,397.12	7,992.11	8,422.87
768.00	888.00	656.81	615.24	1,170.00	1,092.00	580.00	610.00	420.00	495.00
		2,930.00	2,930.00			42.14	19.59	261.83	291.89
9,196.12	10,773.11	20,360.30	20,374.60	6,898.08	6,666.27	8,003.55	8,617.78	9,893.36	10,710.34
2,719.89	3,776.11	8,262.56	9,501.66	3,304.43	3,610.17	5,974.22	7,522.57	8,517.36	9,604.82
474.44	1,431.33	2,847.33	2,765.35	347.46	546.49	430.69	147.12	243.66	216.53
167.78	127.36	129.88	191.04	166.85	19.68	156.10	69.39	112.81	46.77
1,500.46	1,419.04	755.61	941.73	317.03	149.33	380.23	386.02	402.15	338.45
1,421.94	1,449.65	1,611.04	1,294.67	309.33	260.61		18.67		
227.93	241.61	673.40	710.37	715.83	676.47	116.75	122.59	124.21	130.40
6,512.44	8,445.10	14,279.82	15,417.31	5,160.93	5,262.75	7,057.99	8,266.36	9,400.19	10,336.97
2,683.68	2,328.01	6,080.48	4,957.29	1,737.15	1,403.52	945.56	351.42	493.17	373.37
1,146.00	697.00	1,087.00	654.00	540.00	327.00	438.00	261.00	543.00	366.00
1,537.68	1,631.01	4,993.48	4,303.29	1,197.15	1,076.52	507.56	90.42		7.37

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality Population	Blenheim 1,580		Bolton xa 658		Bothwell 613	
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	4,396.96	4,861.99	1,963.73	2,154.22	2,040.83	2,257.72
Commercial light.....	3,638.77	3,799.58	1,593.76	1,310.13	1,532.34	1,407.11
Commercial power.....	3,832.93	4,607.90	3,473.82	4,185.85	885.08	6,511.40
Municipal power.....					88.25	
Street light.....	2,197.00	2,197.00	944.04	975.89	1,142.28	1,146.25
Rural.....			1,106.04		5,946.24	
Miscellaneous.....						2.57
Total.....	14,065.66	15,466.47	9,081.39	8,626.09	11,635.02	11,325.05
EXPENSES						
Power purchased.....	7,343.51	8,301.63	5,945.83	5,926.65	7,031.51	6,423.32
Substation operation.....						
Substation maintenance.....						
Distribution system, operation and maintenance.....	1,792.05	1,096.21	1,345.17	675.50	426.46	365.89
Line transformer maintenance.....						
Meter maintenance.....						
Consumers' premises expenses.....						
Street light, operation and maintenance.....	353.09	739.97	87.06	74.85	105.46	103.23
Promotion of business.....						
Billing and collecting.....						
Gen. office—salaries and exp..	885.93	972.56	180.77	127.00	355.08	299.00
Undistributed expenses.....						
Interest.....	832.95	907.35	1,094.50	1,088.10	576.24	1,009.50
Sinking fund and principal payments on debentures..	236.98	251.20	292.63	307.77	632.08	89.71
Total expenses.....	11,444.51	12,268.92	8,945.96	8,199.87	9,126.83	8,290.65
Gross surplus.....	2,621.15	3,197.55	135.43	426.22	2,508.19	3,034.40
Gross loss.....						
Depreciation charge.....	1,097.00	726.00	938.00	554.00	308.00	196.00
Net surplus.....	1,524.15	2,471.55			2,200.19	2,838.40
Net loss.....			802.57	127.78		

xa Operated by Municipal Council.

xb Hydro and Water Departments under one Commission.

“ C ”—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Brampton xb 4,407		Brantford xb 31,362		Brantford Township		Brigden Police Vil. xa	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
12,186.84	14,393.19	59,931.17	73,887.64	7,725.17	10,417.45	1,174.28	1,218.06
5,659.49	6,127.54	12,373.68	17,127.73	1,171.09	1,538.66	1,276.89	1,399.21
12,152.28	15,002.84	56,408.99	65,848.07	5,094.81	5,260.09	4,115.94	1,994.87
1,198.82	1,244.53	22,938.31	25,437.47				
4,126.00	4,109.83	23,813.12	26,674.12	2,504.70	2,727.84	976.66	976.66
253.10	164.80				81.07		60.30
35,576.53	41,042.73	175,465.27	208,975.03	16,495.77	20,025.11	7,543.77	5,649.10
21,166.54	28,976.83	92,629.23	131,352.24	5,957.15	8,791.51	4,925.99	3,731.60
47.45		4,541.69	5,313.11				
		2,101.64	1,460.90				
1,151.34	1,220.02	1,844.42	3,035.45	912.67	1,274.07	108.40	83.48
90.25	108.34	945.61	630.40				
285.58	270.74	4,080.55	3,036.30				
		341.22					
451.70	386.42	11,693.69	7,615.81	336.25	230.78	104.26	68.07
		1,446.64	1,704.76				
1,740.63	1,854.52	3,841.80	4,092.56				
1,897.08	1,439.82	7,806.43	7,959.93	2,321.81	2,921.76	550.31	468.51
30.00	153.15	5,402.79	5,354.95	225.00	1,271.80		
869.52	421.73	15,278.48	18,382.35	2,466.98	2,551.65	291.33	289.03
2,398.52	2,515.65	7,221.00	13,471.00	1,899.53	1,896.07	624.17	626.66
30,128.61	37,347.22	159,175.19	203,409.76	14,119.39	18,937.64	6,604.46	5,267.35
5,447.97	3,695.51	16,290.08	5,565.27	2,376.38	1,087.47	939.31	381.75
4,156.00	1,232.00	15,444.35	13,034.14	1,999.00	1,330.00	391.00	203.00
1,291.92	2,463.51	845.73		377.38		548.31	178.75
			7,468.87		242.53		

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality Population	Burford Police Vil. xa		Burgessville Police Vil xa		Caledonia xa 1,335	
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
Domestic light.....	\$ 2,817.52 c.	\$ 3,491.08 c.	\$ 756.62 c.	\$ 757.10 c.	\$ 994.76 c.	\$ 1,202.16 c.
Commercial light.....	1,673.49	1,966.34	288.50	257.31	1,584.02	1,731.70
Commercial power.....	132.50	1,057.03	821.31	656.82	1,139.37	958.20
Municipal power.....						
Street light.....	768.00	832.00	380.00	336.00	1,010.65	990.00
Rural.....						
Miscellaneous.....		159.07				
Total.....	5,391.51	7,505.52	2,246.43	2,007.23	4,728.80	4,882.06
EXPENSES						
Power purchased.....	3,386.56	3,664.61	1,232.15	1,491.85	2,180.89	2,837.70
Substation operation.....						
Substation maintenance.....						
Distribution system, operation and maintenance.....	177.01	436.49	6.51	201.86	396.11	431.88
Line transformer maintenance.....						
Meter maintenance.....						
Consumers' premises expenses.....						
Street light, operation and maintenance.....	98.75	107.72	34.25	50.29	125.67	155.79
Promotion of business.....						
Billing and collecting.....						
Gen. office—salaries and exp... Undistributed expenses.....	227.01	380.27	64.62	63.06	164.90	324.88
Interest.....	293.78	303.18	149.96	144.83	226.85	262.22
Sinking fund and principal payments on debentures..	202.64	192.99	127.67	135.05	119.56	126.72
Total expenses.....	4,385.75	5,085.26	1,615.16	2,086.94	3,213.98	4,139.19
Gross surplus.....	1,005.76	2,420.26	631.27		1,514.82	742.87
Gross loss.....				79.71		
Depreciation charge.....	350.00	238.00	182.00	111.00	487.00	238.00
Net surplus.....	655.76	2,182.26	449.27		1,027.82	504.87
Net loss.....				190.71		

xa Operated by Municipal Council.
xb Hydro and Water Departments under one Commission.

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Chatham 15,084		Chippawa 1,029		Clinton xb 1,941		Comber Police Vil. xa	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c. 48,442.47	\$ c. 52,252.33	\$ c. 2,932.89	\$ c. 3,373.63	\$ c. 6,045.27	\$ c. 6,478.04	\$ c. 1,275.54	\$ c. 1,472.95
31,165.17	33,091.92	723.18	706.82	4,064.94	4,125.00	1,289.89	1,549.37
69,336.78	74,996.15	.....	1,487.77	3,213.09	3,505.66	5,294.15	4,555.20
3,001.78	2,865.60	.....	.....	744.89	751.46	.....	.....
13,683.76	13,776.12	1,152.00	1,344.00	1,654.79	1,696.92	875.04	858.36
1,800.00	1,200.00	.....	.....	475.89	.....	.....	.....
167,429.96	178,182.12	4,808.09	6,912.22	16,198.87	16,557.08	8,734.62	8,435.88
67,580.08	86,824.32	1,481.67	1,616.12	7,224.64	8,598.18	5,312.48	4,612.97
5,851.46	6,452.89	.....	.....	.....	.....	.....	.....
3,496.78	1,091.32	.....	.....	.....	.....	.....	.....
4,397.66	6,923.44	615.18	444.03	571.95	626.42	228.53	334.72
1,204.49	455.09	.....	.....	.....	.....	.....	.....
2,753.61	1,971.89	.....	.....	.....	.....	.....	.....
371.10	.....	.....	.....	.....	.....	.....	.....
4,162.79	6,175.26	298.60	28.80	146.18	419.83	84.76	60.97
4,723.66	2,432.24	.....	.....	.....	.....	.....	.....
4,631.91	5,124.68	.....	.....	.....	.....	.....	.....
12,333.31	13,144.58	348.84	542.40	1,586.80	1,688.16	348.79	422.51
3,634.01	6,608.70	.....	.....	.....	104.27	.....	.....
16,203.27	16,091.67	680.36	952.40	2,044.20	1,951.76	514.13	442.60
4,847.25	5,832.22	274.32	374.03	972.49	972.49	310.25	327.05
136,191.38	159,128.30	3,698.97	3,957.78	12,546.26	14,361.11	6,798.94	6,200.82
31,238.58	19,053.82	1,109.10	2,954.44	3,652.61	2,195.97	1,935.68	2,235.06
10,050.00	7,327.00	632.00	364.00	1,490.00	1,077.00	368.00	227.00
21,188.58	11,726.82	477.10	2,590.44	2,162.61	1,118.97	1,567.68	2,008.06

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality Population	Dashwood Police Vil.		Delaware Police Vil. xa		Dereham Township xa	
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	662.20	806.68	882.74	840.90		
Commercial light.....	484.77	648.38	505.52	652.53		
Commercial power.....	1,626.21	1,297.43				
Municipal power.....						
Street light.....	666.25	615.00	378.00	378.00		
Rural.....					7,785.76	8,164.80
Miscellaneous.....						66.83
Total.....	3,439.43	3,367.49	1,766.26	1,871.43	7,785.76	8,231.63
EXPENSES						
Power purchased.....	3,126.68	2,884.10	857.64	823.57	3,906.88	2,738.53
Substation operation.....						
Substation maintenance.....						
Distribution system, operation and maintenance.....	8.88	.55	10.49	20.19	966.81	940.64
Line transformer maintenance.....						
Meter maintenance.....						
Consumers' premises expenses.....						
Street light, operation and maintenance.....	68.32	67.32	71.19	15.99		
Promotion of business.....						
Billing and collecting.....						
Gen. office—salaries and exp..	228.70	217.43	59.35	37.49	397.29	196.50
Undistributed expenses.....				4.13		
Interest.....	159.08	174.75	152.32	143.08	3,413.75	3,402.88
Sinking fund and principal payments on debentures..	58.13	61.61	80.71	84.73		702.26
Total expenses.....	3,649.79	3,405.76	1,231.70	1,129.18	7,874.73	7,980.81
Gross surplus.....			474.56	742.25		250.82
Gross loss.....	210.36	38.27			88.97	
Depreciation charge.....	172.00	103.00	141.00	94.00	2,195.00	1,235.00
Net surplus.....			333.56	648.25		
Net loss.....	382.36	141.27			2,283.97	984.18

xa Operated by Municipal Council.

“ C ”—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Dorchester Police Vil.		Drayton xa 618		Dresden 1,456		Drumbo Police Vil. xa	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,511.61	1,717.89	1,925.38	2,078.59	3,475.26	3,596.86	949.84	1,097.50
473.05	613.24	1,337.86	1,588.41	2,808.43	2,925.60	671.94	717.78
544.88	1,203.65	1,223.58	1,566.95	5,404.44	3,771.98	312.34	380.12
				307.08	682.53		
493.00	493.00	1,080.00	1,080.00	1,693.25	1,745.34	440.00	455.00
						10.94	
3,022.54	4,027.78	5,566.82	6,313.95	13,688.46	12,722.31	2,385.06	2,650.40
1,247.24	1,177.39	3,400.14	3,399.39	6,237.28	6,244.68	1,080.01	1,241.56
307.00	80.99	22.90	61.92	1,456.89	1,977.38	67.32	114.21
61.48	151.69	101.96	83.65		59.09	48.40	90.19
198.78	245.26	216.21	236.16	634.44	992.94	94.36	82.84
162.51	172.91	517.64	462.98	206.94	81.13	167.07	153.34
82.60	86.72	157.11	137.74	491.65	416.69	90.77	95.31
2,059.61	1,914.96	4,415.96	4,381.84	760.70	794.98		
962.93	2,112.82	1,150.86	1,932.11	9,787.90	10,566.89	1,547.93	1,777.09
				3,900.56	2,155.42	837.13	873.31
306.00	193.00	422.00	256.00			203.00	131.00
656.93	1,919.82	728.86	1,676.11	796.00	517.00	634.13	742.31

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality Population	Dublin Police Village xa		Dundas xb 5,100		Dunnville 3,583	
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	503.50	574.41	11,047.75	12,521.50	3,982.33	5,213.57
Commercial light.....	562.44	664.68	6,174.18	6,386.36	6,971.57	8,419.06
Commercial power.....	1,172.31	1,027.27	21,520.47	24,263.48	4,239.39	5,436.35
Municipal power.....			197.16	204.24	1,641.62	1,923.41
Street light.....	700.00	700.00	3,307.22	3,620.24	4,470.27	4,528.60
Rural.....			450.35	759.49		
Miscellaneous.....			268.94	337.27	501.56	180.04
Total.....	2,938.25	2,966.36	42,966.07	48,092.58	21,806.74	25,701.03
EXPENSES						
Power purchased.....	2,169.97	1,975.25	20,937.71	27,801.01	10,918.66	10,504.53
Substation operation.....				87.19		
Substation maintenance.....			162.13			
Distribution system, operation and maintenance.....	208.80	16.60	1,246.39	1,875.65	906.36	1,604.40
Line transformer maintenance.....			458.80	378.14		
Meter maintenance.....			489.99	463.44		
Consumers' premises expenses.....						
Street light, operation and maintenance.....	91.15	81.00	772.04	625.53	334.15	647.99
Promotion of business.....						
Billing and collecting.....			2,100.03	2,093.89		
Gen. office—salaries and exp..	145.10	150.20	2,606.39	2,855.89	2,779.60	2,483.71
Undistributed expenses.....			2,992.22	2,712.16		185.68
Interest.....	364.17	322.17	2,274.00	2,184.23	4,086.06	3,996.52
Sinking fund and principal payments on debentures..	229.20	242.06	1,120.82	1,180.18	1,013.95	1,074.78
Total expenses.....	3,208.39	2,787.28	35,160.52	42,257.31	20,038.78	20,497.61
Gross surplus.....		179.08	7,805.55	5,835.27	1,767.96	5,203.42
Gross loss.....	270.14					
Depreciation charge.....	253.00	147.00	4,400.00	1,045.00	2,641.00	1,637.00
Net surplus.....		32.08	3,405.55	4,790.27		3,566.42
Net loss.....	523.14				873.04	

xa Operated by Municipal Council.

xb Hydro and Water Departments under one Commission.

“ C ”—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Dutton 845		xb Elmira 2,370		Elora 1,091		Embros 463	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c. 2,035.51	\$ c. 2,163.68	\$ c. 5,990.36	\$ c. 7,142.86	\$ c. 2,590.55	\$ c. 3,407.43	\$ c. 1,512.70	\$ c. 1,601.30
1,410.52	1,498.41	3,082.61	4,014.00	2,394.68	2,902.98	1,234.16	1,385.94
2,483.44	2,547.27	7,796.89	10,906.72	6,144.11	8,386.26	1,930.84	1,712.69
		223.31	226.21				
1,244.30	1,289.40	1,610.00	1,956.00	970.50	1,140.00	845.76	845.76
				154.53			
39.87	26.80	476.75	105.41	426.91	273.23		4.75
7,213.64	7,525.56	19,179.92	24,351.20	12,681.28	16,109.90	5,523.46	5,550.44
4,278.18	4,775.70	10,187.41	14,397.61	7,947.21	9,385.88	3,276.11	3,222.05
284.64	131.81	805.55	1,923.91	1,350.75	1,663.40	79.82	80.15
129.60	149.06	273.90	151.33	255.96	192.44	54.96	78.87
903.50	978.27	2,362.12	1,473.18	1,211.10	1,278.98	203.06	236.12
276.16	246.49	1,026.19	955.47	573.11	568.76	507.46	459.94
169.27	179.42	380.39	403.21	401.44	422.02	216.12	229.08
6,041.35	6,460.75	15,045.56	19,304.71	11,739.57	13,511.48	4,337.53	4,306.21
1,172.29	1,064.81	4,134.36	5,046.49	941.71	2,598.42	1,185.93	1,244.23
530.00	337.00	1,417.00	958.00	937.00	675.00	408.00	269.00
642.29	727.81	2,717.36	4,088.49	4.71	1,923.42	777.93	975.23

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Continued

Municipality Population	Etobicoke Township		Exeter 1,507		Fergus xa 1,762	
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light	21,326.96	29,162.15	4,196.23	5,217.29	4,072.20	6,037.68
Commercial light	2,734.25	3,737.70	2,815.15	3,069.92	3,873.68	4,011.60
Commercial power	5,076.25	6,019.24	4,566.28	4,753.09	3,582.53	4,871.30
Municipal power			349.85	517.14	609.40	684.13
Street light	3,867.66	4,491.90	2,182.98	2,010.00	1,996.57	1,755.00
Rural						
Miscellaneous			376.95	413.29		
Total	33,005.12	43,410.99	14,487.44	15,980.73	14,134.38	17,359.71
EXPENSES						
Power purchased	8,382.37	15,782.96	8,531.44	11,135.67	7,619.95	8,705.62
Substation operation						
Substation maintenance						
Distribution system, operation and maintenance	2,364.29	3,552.48	224.54	118.77	1,789.04	2,432.41
Line transformer maintenance						
Meter maintenance						
Consumers' premises expenses						
Street light, operation and maintenance	565.84	500.57	315.52	193.60	238.99	204.88
Promotion of business						
Billing and collecting						
Gen. office—salaries and exp.	2,048.00	4,392.85	1,516.26	1,832.87	1,044.23	931.33
Undistributed expenses					383.38	230.81
Interest	6,073.15	6,217.31	664.32	571.86	1,416.35	1,359.53
Sinking fund and principal payments on debentures	1,453.74	1,540.97	534.83	561.57	304.57	321.33
Total expenses	20,887.39	31,987.14	11,786.91	14,414.34	12,796.51	14,185.91
Gross surplus	12,117.73	11,423.85	2,700.53	1,566.39	1,337.87	3,173.80
Gross loss						
Depreciation charge	5,380.00	3,842.00	959.00	603.00	1,285.00	803.00
Net surplus	6,737.73	7,581.85	1,741.53	963.39	52.87	2,370.80
Net loss						

xa Operated by Municipal Council.

“ C ”—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Ford City 5,113		Forest 1,422		Galt 13,332		Georgetown 2,098		Glencoe 835	
1922		1921	1922	1921	1922	1921	1922	1921	1922
\$	c.	\$	c.	\$	c.	\$	c.	\$	c.
6,501.74		5,366.42		5,784.92		44,879.01		61,672.58	
1,745.29		3,348.69		3,550.92		19,055.01		23,325.29	
8,328.14		4,096.29		4,574.05		42,281.52		53,761.76	
.....		99.18		103.32		4,797.97		6,271.10	
484.00		2,621.62		2,484.14		16,548.50		18,229.81	
.....		
.....		466.26		111.00		3,974.14		.....
.....		
17,059.17		15,998.46		16,608.35		131,536.15		163,260.54	
.....		
15,554.17		6,779.33		7,066.40		64,467.06		108,097.51	
.....		.....		.....		4,837.50		5,381.44	
.....		.....		.....		89.23		59.24	
896.28		1,988.16		1,301.17		1,253.93		3,158.55	
.....		.....		.....		342.50		99.14	
.....		.....		.....		302.30		318.16	
.....		
156.53		204.33		140.29		5,935.73		2,304.59	
.....		
.....		.....		.....		3,420.94		3,095.70	
1,047.00		1,141.01		1,360.01		6,394.57		8,368.92	
.....		.....		.....		1,391.15		4,802.56	
.....		1,373.43		987.73		10,562.20		19,371.85	
.....		
.....		1,364.00		1,439.06		5,944.26		11,381.17	
.....		
17,653.98		12,850.26		12,294.66		104,941.37		166,438.83	
.....		
.....		3,148.20		4,313.69		26,594.78		.....
594.81		.....		.....		.....		3,178.29	
.....		
.....		1,171.00		739.00		13,282.16		11,210.97	
.....		
.....		1,977.20		3,574.69		13,312.62		.....
.....		
594.81		.....		.....		.....		14,389.26	

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

NIAGARA

SYSTEM—Continued

Municipality Population	Goderich xb 4,108		Grantham Township xi		Granton Police Vil.	
	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	12,258.50	13,932.54			1,085.25	1,184.71
Commercial light.....	6,097.39	6,775.78			508.75	532.53
Commercial power.....	11,256.85	10,553.63			1,747.17	1,637.41
Municipal power.....	4,602.54	4,602.50				
Street light.....	4,163.04	4,637.50			480.00	480.00
Rural.....			7,852.83	7,695.24		
Miscellaneous.....	789.45	830.37				
Total.....	39,167.77	41,332.32	7,852.83	7,695.24	3,821.17	3,834.65
EXPENSES						
Power purchased.....	21,554.59	25,998.65	1,405.83	1,890.02	2,242.62	2,328.48
Substation operation.....	3,177.67	3,285.20				
Substation maintenance.....						
Distribution system, operation and maintenance.....	1,158.67	1,002.44	964.18	1,167.65	36.35	99.29
Line transformer maintenance.....	251.59	210.70				
Meter maintenance.....	877.22	34.74				
Consumers' premises expenses.....						
Street light, operation and maintenance.....	176.75	250.43			47.09	47.44
Promotion of business.....						
Billing and collecting.....	905.77	707.90				
Gen. office—salaries and exp..	1,711.76	1,428.40	442.35	380.16	108.98	93.01
Undistributed expenses.....	423.28	530.34				
Interest.....	2,365.02	2,614.49	2,178.12	2,787.59	212.34	186.81
Sinking fund and principal payments on debentures..	2,238.52	2,337.17	895.24	390.85	59.25	62.80
Total expenses.....	34,840.84	38,400.46	5,885.72	6,616.27	2,706.63	2,817.83
Gross surplus.....	4,326.93	2,931.86	1,967.11	1,078.97	1,114.54	1,016.82
Gross loss.....						
Depreciation charge.....	4,260.00	2,629.00	475.40	937.10	217.00	133.00
Net surplus.....	66.93	302.86	1,491.71	141.87	897.54	883.82
Net loss.....						

xa Operated by Municipal Council.

xb Hydro and Water Departments under one Commission.

xc Hydro and Gas under one Commission.

x Operated by St. Catharines.

“ C ”—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Guelph xc 18,027		Hagersville xa 1,271		Hamilton 118,243		Harriston 1,311	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
38,421.71	47,212.44	2,340.28	2,630.39	237,348.81	277,025.34	3,412.75	3,517.32
23,439.07	28,146.36	1,928.84	2,631.95	53,217.08	63,683.93	2,498.35	2,504.69
72,549.55	83,293.38	12,919.71	14,602.84	193,937.52	231,246.10	7,731.21	6,717.20
.....	6,048.04	.....	.....	28,440.82	41,170.99	595.57	592.06
9,021.12	8,790.54	833.32	800.00	65,438.53	81,147.64	915.00	976.00
.....	.....	.....	.....	12,664.57	16,535.86	.....	.....
1,340.25	10,075.26	22.20	11.89	17,639.82	18,502.92	.....	.....
144,771.70	183,566.02	18,044.35	20,677.07	608,687.15	729,312.78	15,152.88	14,307.27
84,268.29	120,896.87	11,754.85	13,401.89	304,139.38	453,911.63	8,314.86	9,605.19
4,079.63	3,630.91	.....	.....	21,587.41	21,397.17	.....	.....
.....	.....	.....	.....	2,178.27	4,243.58	.....	.....
6,018.37	3,055.59	890.84	1,986.44	21,026.31	26,240.72	1,176.76	922.26
1,178.22	892.48	.....	.....	7,556.81	9,887.81	.....	.....
1,702.78	3,010.09	.....	.....	10,027.55	9,496.80	.....	.....
.....	.....	.....	.....	6,028.08	6,245.48	.....	.....
4,351.50	4,720.15	60.67	277.86	16,794.08	14,853.75	282.01	252.11
4,856.48	4,725.54	.....	.....	6,039.84	6,862.81	.....	.....
5,554.30	4,805.09	1,201.45	1,106.03	25,433.87	26,285.80	.....	.....
6,491.98	8,209.15	.....	.....	27,599.98	28,175.97	581.83	650.04
3,340.73	4,439.81	205.62	219.66	15,934.04	15,452.35	.....	.....
.....	.....	.....	.....	52,246.27	60,991.07	789.95	532.08
5,037.65	3,909.08	208.12	218.54	26,678.71	32,927.65	603.94	637.22
126,979.93	162,294.76	14,321.55	17,210.42	547,360.60	716,972.59	11,749.35	12,598.90
17,791.77	21,271.26	3,722.80	3,466.65	61,326.55	12,340.19	3,403.53	1,708.37
.....
12,466.00	9,442.00	708.00	425.00	61,173.28	37,345.31	783.00	477.00
5,325.77	11,829.26	3,014.70	3,041.65	153.27	.....	2,620.53	1,231.37
.....	.....	.....	.....	.....	25,005.12	.....	.....

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality Population	Hensall xa 738		Hespeler 2,853		Highgate xa 417	
	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	2,099.20	2,369.38	6,648.35	8,011.51	1,065.47	1,092.54
Commercial light.....	1,391.61	1,439.11	2,803.97	3,324.81	879.34	925.94
Commercial power.....	1,046.19	1,143.68	6,920.14	9,750.75	1,318.16	1,606.09
Municipal power.....	50.33	76.77	319.31	479.48		
Street light.....	975.00	1,048.75	1,858.50	1,962.00	669.00	677.50
Rural.....						
Miscellaneous.....			40.65	40.75		
Total.....	5,562.33	6,077.69	18,590.92	23,569.30	3,931.97	4,302.07
EXPENSES						
Power purchased.....	3,079.13	4,080.84	9,841.93	1,339.11	2,080.99	2,486.69
Substation operation.....			1,360.23	778.17		
Substation maintenance.....			219.20			
Distribution system, operation and maintenance.....	177.94	200.26	853.63	282.94	130.25	60.62
Line transformer maintenance.....			294.82	228.64		
Meter maintenance.....						
Consumers' premises expenses.....						
Street light, operation and maintenance.....	224.88	149.77	402.09	428.10	43.26	19.69
Promotion of business.....						
Billing and collecting.....						
Gen. office—salaries and exp... Undistributed expenses.....	398.77	579.55	2,401.47	2,945.51	249.20	217.25
Interest.....	612.07	627.42	571.04	753.26		
Sinking fund and principal payments on debentures...	612.07	627.42	652.49	721.52	233.78	210.06
	228.70	241.57	1,530.94	1,385.50	91.48	96.04
Total expenses.....	4,721.49	5,879.41	18,127.84	20,917.75	2,828.96	3,090.35
Gross surplus.....	840.84	198.28	463.08	2,651.55	1,103.01	1,211.72
Gross loss.....						
Depreciation charge.....	524.00	325.00	2,088.00	1,467.00	289.00	176.00
Net surplus.....	316.84			1,184.55	814.01	1,035.72
Net loss.....		126.72	1,624.92			

xa Operated by Municipal Council.

xb Hydro and Water Departments under one Commission.

xe Hydro, Gas and Railway under one Commission.

“C”—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Ingersoll xb 5,253		Kitchener xe 22,717		Lambeth, Police Village xa		Listowel xb 2,429	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
12,913.37	16,254.07	48,095.22	59,793.35	1,616.48	1,931.32	8,190.77	9,584.04
7,368.55	8,918.23	32,306.38	41,788.58	414.56	525.13	4,700.32	5,702.40
19,802.79	20,504.91	101,556.89	127,899.44	305.58	.....	11,664.28	9,031.16
833.29	945.07	22,677.04	23,335.46	.....	326.27	1,317.77	2,276.33
3,810.00	4,141.67	16,163.77	17,754.20	520.00	560.70	3,501.00	3,510.00
.....
1,305.30	1,599.68	3,533.46	4,894.27	.....	.....	.....	.....
.....
46,033.30	52,363.63	224,332.76	275,465.30	2,856.62	3,343.42	29,374.14	30,103.93
.....
25,721.93	33,201.74	137,226.38	201,539.40	1,341.93	1,225.49	15,222.99	15,574.70
1,130.01	1,129.74	8,179.08	8,133.56	.....	.....	.....	.....
.....	.....	1,475.15	1,838.91	.....	.....	.....	.....
1,927.00	2,247.38	10,633.79	17,380.13	180.45	356.74	1,146.82	1,740.30
47.99	349.45	899.09	1,565.21	.....	.....	.....	.....
743.77	110.39	4,407.40	2,613.53	.....	.....	.....	.....
.....
1,909.96	1,379.93	5,021.19	5,883.54	29.66	30.91	1,060.34	825.34
.....	.....	104.87	261.92	.....	.....	.....	.....
1,781.40	1,759.02	5,123.28	4,992.18	.....	.....	.....	.....
2,166.53	2,256.82	5,152.68	5,416.24	158.33	30.86	3,672.77	3,411.09
2,071.60	2,262.89	6,039.77	5,775.34	.....	.....	.....	.....
1,801.79	2,065.32	7,838.75	8,754.51	241.51	216.49	1,583.77	1,759.17
.....
1,677.35	1,677.35	9,244.50	9,651.89	67.71	76.07	2,195.35	2,068.41
.....
40,979.33	48,440.03	201,345.93	273,806.36	2,019.59	1,936.56	24,882.04	25,379.01
5,053.97	3,923.60	22,986.83	1,658.94	837.03	1,406.86	4,492.10	4,724.92
.....
3,995.00	2,524.00	19,567.00	14,738.11	216.00	160.00	2,043.00	1,294.00
.....
1,058.97	1,399.60	3,419.83	.....	621.03	1,246.86	2,449.10	3,430.92
.....	.....	.....	13,079.17	.....	.....	.....	.....

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

**NIAGARA
SYSTEM—Continued**

Municipality Population	London xb 59,784		Louth Township xa		Lucan 624	
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	185,949.18	217,828.22			2,343.88	2,737.74
Commercial light.....	92,874.24	104,184.03			1,025.25	1,081.12
Commercial power.....	218,138.49	227,315.60			7,368.90	5,829.91
Municipal power.....	27,308.78	46,338.49				
Street light.....	36,087.06	36,155.73			951.96	951.96
Rural.....	3,283.24	3,559.64	**728.10	**808.76	73.02	75.16
Miscellaneous.....	26,248.63	21,862.82				19.57
Total.....	589,889.62	657,244.53	728.10	808.76	11,763.01	10,695.46
EXPENSES						
Power purchased.....	291,370.63	407,081.33	**	**	6,424.35	6,681.53
Substation operation.....	20,463.89	21,245.88				
Substation maintenance.....	4,120.08	4,765.81				
Distribution system, operation and maintenance.....	12,711.14	14,878.27	521.14	39.83	732.68	863.66
Line transformer maintenance.....	4,818.82	3,565.69		158.83		
Meter maintenance.....	16,966.30	17,063.21		5.35		
Consumers' premises expenses.....	8,397.00	7,428.17				
Street light, operation and maintenance.....	5,889.75	5,534.56			182.13	223.24
Promotion of business.....	7,168.23	4,880.06				
Billing and collecting.....	21,870.51	16,474.08				
Gen. office—salaries and exp..	36,546.40	31,846.85	76.39	57.01	619.95	710.73
Undistributed expenses.....	26,475.96	28,436.40				
Interest.....	48,983.72	46,748.77	443.52	471.77	347.16	132.31
Sinking fund and principal payments on debentures..	24,701.76	29,000.11	50.89	54.45	356.94	373.72
Total expenses.....	530,484.19	638,949.19	1,091.94	787.24	8,653.21	8,985.19
Gross surplus.....	59,405.43	18,295.34		21.52	3,109.80	1,710.27
Gross loss.....			363.84			
Depreciation charge.....	58,898.95	43,801.43	70.00	85.00	614.00	373.00
Net surplus.....	506.48				2,495.80	1,337.27
Net loss.....		25,506.09	433.84	63.48		

xa Operated by Municipal Council.
xb Hydro and Water Departments under one Commission.
** Service Charge only—Energy and balance of Revenue in Port Dalhousie accounts.

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Lynden Police Village xa		Markham xa 970		Merritton 2,589		Milton 1,900	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c. 1,191.73 478.11 3,583.86 446.75	\$ c. 1,343.50 455.15 3,310.64 548.90	\$ c. 3,263.60 1,303.84 2,260.71 327.96 2,093.00	\$ c. 3,116.38 1,325.79 2,323.45 232.45 1,906.89	\$ c. 6,010.43 1,238.88 3,203.78 2,220.00	\$ c. 6,163.42 1,519.78 2,977.95 2,200.00	\$ c. 4,502.81 2,531.11 16,596.71 1,839.76	\$ c. 5,164.20 2,487.17 19,667.48 1,838.30
5,700.35	5,658.19	9,249.11	8,904.96	12,653.09	12,861.15	26,714.19	30,175.81
4,362.89	4,351.23	3,139.96	3,195.54	3,052.27	4,784.89	18,846.46	27,855.10
43.44	77.65	1,047.84	1,083.35	3,581.58	3,504.45	974.96	1,258.83
27.14	41.93	149.42	166.25	611.50	404.28	258.51	254.59
127.24	111.41	470.47	567.10	1,125.07 250.00	866.27 250.00	1,353.05	1,619.83
261.65	215.27	696.19	547.47	203.78	203.93	492.99	236.44
81.11	85.58	600.18	632.39	543.11	570.26	893.64	938.32
4,903.47	4,883.07	6,104.06	6,192.10	9,367.31	10,584.08	22,819.61	32,163.11
796.88	775.12	3,145.05	2,712.86	3,285.78	2,277.07	3,894.58	..... 1,987.30
228.00	141.00	755.00	330.00	948.00	549.00	1,496.00	383.00
568.88	634.12	2,390.05	2,382.86	2,337.78	1,728.07	2,398.58	..... 2,370.30

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality Population	Milverton 1,054		Mimico 4,187		Mitchell xb 1,699	
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.	2,085.42	2,453.16	13,068.97	16,083.14	4,660.66	5,355.08
Commercial light.	1,688.69	1,886.98	2,008.37	2,452.03	3,101.46	3,337.99
Commercial power.	8,118.27	9,815.47	1,827.82	2,083.24	5,542.41	4,901.36
Municipal power.	89.55	294.50	1,995.76	3,176.03	.....	800.00
Street light.	1,020.84	969.00	2,048.10	3,248.00	1,980.00	2,040.00
Rural. ....	.....	.....	.....	.....	.....	.....
Miscellaneous. ....	.....	.....	138.62	22.78	711.65	899.10
Total.	13,002.77	15,419.11	21,087.64	27,065.22	15,996.18	17,333.53
EXPENSES						
Power purchased.	8,748.51	12,386.18	9,185.53	17,497.91	6,060.55	8,313.19
Substation operation. ....	.....	.....	.....	.....	.....	.....
Substation maintenance. ....	.....	.....	.....	.....	136.30	107.53
Distribution system, operation and maintenance.	379.05	398.50	3,204.25	3,801.47	396.75	694.12
Line transformer maintenance. ....	.....	.....	.....	.....	.....	.....
Meter maintenance. ....	.....	.....	.....	.....	.....	.....
Consumers' premises expenses. ....	.....	.....	.....	.....	.....	.....
Street light, operation and maintenance.	206.84	221.33	667.23	627.02	136.48	317.28
Promotion of business. ....	.....	.....	.....	.....	.....	.....
Billing and collecting. ....	.....	.....	.....	.....	.....	.....
Gen. office—salaries and exp. .	720.98	866.22	2,385.31	2,639.22	2,067.08	1,949.85
Undistributed expenses. ....	.....	.....	.....	234.00	.....	.....
Interest.	244.86	320.83	1,206.09	1,300.02	63.14	213.97
Sinking fund and principal payments on debentures. .	356.15	375.74	886.64	943.83	1,696.40	992.06
Total expenses.	10,656.39	14,568.80	17,535.05	27,043.47	10,556.70	12,588.00
Gross surplus.	2,346.38	850.31	3,552.59	21.75	5,439.48	4,745.53
Gross loss. ....	.....	.....	.....	.....	.....	.....
Depreciation charge.	628.00	409.00	2,461.00	1,790.00	2,069.00	1,467.00
Net surplus.	1,718.38	441.31	1,091.59	.....	3,370.48	3,278.53
Net loss. ....	.....	.....	.....	1,768.25	.....	.....

xa Operated by Municipal Council.

xb Hydro and Water Departments under one Commission.

“ C ”—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Moorefield Police Vil. xa		Mount Brydges P.V. xa		Newbury 301		New Hamburg 1,401	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c. 637.19 540.33 1,285.41 475.00	\$ c. 712.43 575.24 1,368.96 475.00	\$ c. 1,398.23 457.24 836.67 532.00	\$ c. 1,398.02 540.62 737.60 514.21	\$ c. 358.18 306.52 511.05 624.97	\$ c. 683.98 543.61 778.83 920.00	\$ c. 3,570.31 1,751.04 5,253.46 1,967.00	\$ c. 4,033.82 2,040.13 6,732.68 2,305.75
2,937.93	3,131.63	3,224.15	3,190.45	1,800.72	2,926.42	13,478.44	15,270.77
1,868.94	2,308.28	1,863.09	1,762.37	863.59	1,370.14	7,644.94	9,485.86
9.50	27.73	117.88	118.11		33.34	1,637.83	1,656.08
100.57	73.96	48.00	60.00		59.85	393.28	190.29
86.67	85.69	150.32	80.51	85.72	113.38	1,120.88	1,225.13
234.88	222.47	167.21	147.93	340.72	561.76	678.21	717.70
148.60	157.14	80.34	84.77	314.35	740.04	441.31	463.37
2,449.16	2,875.27	2,426.84	2,253.69	1,604.38	2,878.51	11,915.65	13,738.43
488.77	256.36	797.31	936.76	196.34	47.91	1,562.79	1,532.34
187.00	108.00	222.00	142.00		166.00	1,306.00	382.00
301.77	148.36	575.31	794.76	196.34		256.79	1,150.34
					118.09		

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality Population	New Toronto xb 2,947		Niagara Falls 15,895		Niagara-on-the-Lake 1,714	
	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	6,731.42	9,039.13	59,722.54	72,634.03	5,847.10	5,769.68
Commercial light.....	3,798.61	4,089.35	21,208.01	26,699.31	3,291.89	2,777.10
Commercial power.....	60,083.39	35,022.06	27,427.69	29,131.59	910.89	935.65
Municipal power.....	6,211.02	8,210.12	5,792.55	10,830.64	1,634.01	1,531.40
Street light.....	1,126.98	2,560.55	13,483.59	18,550.07	2,798.75	2,535.51
Rural.....						
Miscellaneous.....	890.08	162.32				14.85
Total.....	78,841.50	59,083.53	127,634.38	157,845.64	14,482.64	13,564.19
EXPENSES						
Power purchased.....	68,979.18	55,301.30	50,073.13	81,658.93	3,407.88	4,767.05
Substation operation.....			5,960.90	5,749.93		
Substation maintenance.....						
Distribution system, operation and maintenance.....	4,559.34	6,323.19	12,235.05	9,962.42	1,975.25	2,642.54
Line transformer maintenance.....			754.50	1,233.98		
Meter maintenance.....			2,354.79	3,365.91		
Consumers' premises expenses.....						
Street light, operation and maintenance.....	742.66	450.30	7,822.97	6,914.59	624.80	404.45
Promotion of business.....						
Billing and collecting.....			3,745.53	4,231.72		
Gen. office—salaries and exp..	3,175.68	2,647.06	5,670.01	6,223.73	1,231.28	1,342.60
Undistributed expenses.....		21.89	4,430.58	5,051.67		
Interest.....			7,362.84	12,958.19	486.60	407.97
Sinking fund and principal payments on debentures..	169.43	177.90	10,351.55	14,762.26	1,031.91	1,083.51
Total expenses.....	77,626.29	64,921.64	110,761.85	152,113.33	8,757.72	10,648.12
Gross surplus.....	1,215.21		16,872.53	5,732.31	5,724.92	2,916.07
Gross loss.....		5,838.11				
Depreciation charge.....	2,354.00	1,624.00	12,539.50	7,448.00	708.00	448.00
Net surplus.....			4,333.03		5,016.92	2,468.07
Net loss.....	1,138.79	7,462.11		1,715.69		

xa Operated by Municipal Council.

xb Hydro and Water Departments under one Commission.

“ C ”—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Norwich xb 1,307		Oil Springs 491		Otterville Police Vil. xa		Palmerston xb 1,780	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
4,824.49	5,209.87	701.04	795.54	1,421.89	1,446.48	5,035.03	5,419.45
2,235.71	2,436.17	503.46	527.91	760.53	717.09	4,736.84	4,110.84
1,935.35	1,721.26	6,970.28	12,387.37	1,401.36	1,313.67	3,504.55	4,432.81
1,087.64	705.33				75.00	1,077.14	1,247.11
1,667.26	1,771.62	496.65	587.90	324.00	330.00	1,740.00	1,746.75
10,764.22	11,387.21						
		369.40	1,023.68			1,412.39	163.57
22,514.67	23,231.46	9,040.83	15,322.40	3,907.78	3,882.24	17,505.95	17,120.53
8,950.13	9,792.37	5,245.21	8,308.45	1,661.26	1,944.01	6,845.88	8,734.65
1,513.13	2,265.63	626.85	1,292.69	59.77	163.37	461.42	512.40
346.74	97.43						
	138.15						
209.61	277.39	58.31	36.64	21.29	60.54	191.45	202.32
1,296.95	1,354.27	182.79	325.97	271.95	373.89	1,181.06	2,050.19
5,003.61	5,323.53		65.00				
328.90	156.50	597.79	964.42	139.74	87.46	823.55	123.66
314.80	330.54	343.20	581.27	163.70	173.53	1,194.45	1,252.72
17,963.87	19,735.81	7,054.15	11,574.44	2,317.71	2,802.80	10,697.81	12,875.94
4,550.80	3,495.65	1,986.68	3,747.96	1,590.07	1,079.44	6,908.14	4,244.59
2,970.00	1,706.00	628.00	400.00	286.00	180.00	1,015.00	672.00
1,580.80	1,789.65	1,358.68	3,347.96	1,304.07	899.44	5,793.14	3,572.59

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality	Paris		Parkhill		Petrolia	
Population	4,400		1,201		2,911	
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	9,368.93	11,791.12	3,049.70	3,443.03	7,786.04	7,797.98
Commercial light.....	4,532.48	4,670.02	2,243.54	1,974.60	6,246.63	6,108.86
Commercial power.....	15,619.82	14,518.55	617.93	606.36	21,483.70	19,958.48
Municipal power.....	1,225.00	1,225.00	568.42	551.03		
Street light.....	4,515.00	5,609.40	2,490.00	2,154.19	3,493.36	3,518.28
Rural.....						
Miscellaneous.....		841.12			847.25	1,008.96
Total.....	35,261.23	38,655.21	8,969.59	8,729.21	39,856.98	38,392.56
EXPENSES						
Power purchased.....	15,186.57	21,786.10	3,735.92	4,031.83	18,139.05	21,622.31
Substation operation.....	1,397.27	1,253.51				
Substation maintenance.....					225.35	
Distribution system, operation and maintenance.....	2,327.29	2,556.46	121.57	57.83	1,148.57	984.85
Line transformer maintenance.....		24.82			502.72	357.21
Meter maintenance.....	134.12	86.90			165.28	72.79
Consumers' premises expenses.....						
Street light, operation and maintenance.....	769.98	736.13	143.62	125.46	323.87	609.36
Promotion of business.....						
Billing and collecting.....	470.00	334.15				
Gen. office—salaries and exp.....	1,118.56	1,166.15	350.60	385.91	3,846.35	3,481.87
Undistributed expenses.....	436.32	1,106.84			1,337.70	1,646.19
Interest.....	2,021.32	2,116.75	1,105.49	629.85	2,622.04	2,182.13
Sinking fund and principal payments on debentures.....	4,374.73	4,456.09	366.61	386.76	1,146.32	1,211.94
Total expenses.....	28,236.16	35,723.90	5,823.81	5,617.64	29,457.25	32,168.65
Gross surplus.....	7,025.07	2,931.31	3,145.78	3,111.57	10,399.73	6,223.91
Gross loss.....						
Depreciation charge.....	4,178.00	2,825.00	670.00	388.00	2,808.00	1,650.00
Net surplus.....	2,847.07	106.31	2,475.78	2,723.57	7,591.73	4,573.91
Net loss.....						

xa Operated by Municipal Council.

a Fourteen months' operation.

“ C ”—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Plattsville Police Vil. xa		Port Colborne 3,123		Port Credit xa 1,119		Port Dalhousie 1,424		Pt. Dover a 1,380
1921	1922	1921	1922	1921	1922	1921	1922	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,066.62	1,283.04	8,220.47	9,496.22	3,878.10	4,220.61	5,134.11	6,376.33	2,069.83
706.15	790.79	5,125.80	4,990.40	1,479.06	1,786.91	1,018.97	1,162.77	2,075.46
302.26	222.29	3,564.43	7,602.88	1,536.81	1,525.24	1,054.38	1,758.66	261.85
		816.75						
555.00	555.00	1,731.75	2,153.25	1,100.00	1,122.00	1,442.00	1,442.00	3,183.00
							1,121.65	
3.70	4.02	822.25	635.62					
2,633.73	2,855.14	20,281.45	24,878.37	7,993.97	8,654.76	8,649.46	11,861.41	7,590.14
2,394.50	2,672.45	6,724.89	12,157.82	3,348.13	5,490.20	2,908.23	4,922.70	3,754.92
127.84	82.42	1,224.60	1,152.39	398.18	226.72	2,384.22	1,488.87	164.53
65.26	61.13		261.33	204.28	41.15	159.77	240.80	226.47
157.29	104.07	3,511.71	3,566.84	850.56	736.97	794.30	861.81	228.69
211.24	264.67	2,382.60	343.00 3,200.68	217.11	131.15	675.42	770.75	1,478.80
105.63	110.92	1,210.27	1,603.04	262.58	276.68	464.46	674.67	605.12
3,061.76	3,295.66	15,054.07	22,285.10	5,280.84	6,902.87	7,386.40	8,959.60	6,458.53
		5,227.38	2,593.27	2,713.13	1,751.89	1,263.06	2,901.81	1,131.61
428.03	440.52							
244.00	161.00	1,892.00	1,093.00	765.94	203.00	649.00	467.00	527.00
		3,335.38	1,500.27	1,947.19	1,548.89	614.06	2,434.81	604.61
672.03	601.52							

STATEMENT
Comparative Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality Population	Port Stanley xa 717		Preston xb 5,547		Princeton Police Vil. xa	
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	6,558.51	7,306.84	15,234.56	19,038.45	1,223.37	1,527.18
Commercial light.....	1,608.99	1,881.49	8,008.17	9,203.81	393.41	469.37
Commercial power.....	4,643.48	5,120.64	31,385.77	37,541.97		
Municipal power.....	700.55	599.91	780.00	1,135.78		
Street light.....	1,729.05	1,791.88	3,307.32	5,135.96	400.00	400.00
Rural.....						
Miscellaneous.....		34.70	200.78	477.14		
Total.....	15,240.58	16,735.46	58,916.60	72,533.11	2,016.78	2,396.55
EXPENSES						
Power purchased.....	8,105.86	9,449.46	35,661.24	48,806.29	1,543.22	1,480.78
Substation operation.....			4,605.57	3,875.00		
Substation maintenance.....			521.83	970.81		
Distribution system, operation and maintenance.....	1,046.04	802.80	3,191.53	3,175.48	60.23	161.33
Line transformer maintenance.....			180.15	381.07		
Meter maintenance.....			181.72	553.74		
Consumers' premises expenses.....						
Street light, operation and maintenance.....	500.26	298.27	342.60	307.97	18.99	24.15
Promotion of business.....			2,001.82	1,263.67		
Billing and collecting.....						
Gen. office—salaries and exp..	2,239.22	1,851.54	2,594.05	1,482.32	124.71	63.45
Undistributed expenses.....	47.85		2,008.63	2,095.99		
Interest.....	582.34	722.84	3,309.31	4,434.75	178.37	170.41
Sinking fund and principal payments on debentures..	457.37	480.25	4,354.12	4,604.27	71.61	75.18
Total expenses.....	12,978.94	13,605.16	58,992.35	71,951.36	1,997.13	1,975.30
Gross surplus.....	2,261.64	3,130.30		581.75	19.65	421.25
Gross loss.....			75.75			
Depreciation charge.....	1,157.00	798.00	5,452.00	3,922.00	144.00	98.00
Net surplus.....	1,104.64	2,332.30				323.25
Net loss.....			5,527.75	3,340.25	124.35	

xa Operated by Municipal Council.
xb Hydro and Water Departments under one Commission.

“ C ”—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Queenston Police Vil. xa		Ridgetown xb 2,267		Riverside 3,000	Rockwood P.V. xa		Rodney 756	
1921	1922	1921	1922	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
468.56	996.25	4,524.10	4,308.72	3,298.22	1,799.39	1,939.72	1,849.15	1,897.70
90.49	159.43	3,401.55	3,164.42	320.09	584.02	550.71	1,548.45	1,362.47
433.50	591.09	5,385.74	5,509.07	312.30	2,056.68	1,434.38	1,427.43	1,343.34
.....	.....	815.15	840.66	.....	.....	.....	.....	.....
406.00	627.80	2,371.59	2,252.04	.....	708.21	788.06	1,187.50	1,048.47
.....
.....	29.45	840.83	2,058.09	.....	.....	.....	20.96	.....
1,398.55	2,404.02	17,338.96	18,133.00	3,930.61	5,148.30	4,712.87	6,033.49	5,651.98
413.07	803.00	8,006.37	8,818.85	2,848.49	2,982.79	2,593.52	2,522.47	3,026.40
.....
9.00	77.35	1,891.98	1,743.29	569.48	102.33	83.97	193.72	189.79
.....
3.00	27.55	245.32	483.25	.....	46.98	122.57	165.61	126.82
.....
226.65	258.11	885.39	882.99	548.80	305.40	416.53	342.30	252.46
.....	.....	.....	383.66	.....	.....	11.21	.....	.....
172.70	613.40	477.76	275.37	.....	342.65	54.59	385.76	327.22
.....
.....	217.48	896.68	943.30	.....	.....	.....	145.36	153.36
823.92	1,996.89	12,403.50	13,530.71	3,966.77	3,780.15	3,282.39	3,754.22	4,076.05
574.63	407.13	4,935.46	4,602.29	.....	1,368.15	1,430.48	2,279.27	1,575.93
.....	.....	.....	.....	36.16	.....	.....	.....	.....
.....	167.00	1,043.00	654.00	.....	410.00	276.00	434.00	266.00
574.63	240.13	3,892.46	3,948.29	.....	958.15	1,154.48	1,845.27	1,309.93
.....	.....	.....	.....	36.16	.....	.....	.....	.....

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality Population	St. Catharines 20,961		St. George P.V. xa		St. Clair a Beach 82	St. Jacobs P.V. xa	
Year	1921	1922	1921	1922	1922	1921	1922
EARNINGS							
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	55,560.41	59,603.93	1,312.39	1,608.26	113.46	989.14	1,258.71
Commercial light.....	10,321.67	11,409.66	656.56	719.97	504.81	524.38	456.62
Commercial power.....	54,947.24	66,583.84	2,029.88	2,151.07	66.64	2,303.05	1,136.57
Municipal power.....							
Street light.....	15,135.22	18,151.15	396.00	396.00		513.00	480.00
Rural.....			188.47	205.87			
Miscellaneous.....	1,561.06	1,223.73					
Total.....	137,525.60	156,972.31	4,583.30	5,081.17	684.91	4,329.57	3,331.90
EXPENSES							
Power purchased.....	49,991.59	91,162.89	3,025.92	2,623.33	639.99	2,775.48	2,123.77
Substation operation.....	3,722.55	2,998.53					
Substation maintenance.....	1,323.65	478.49					
Distribution system, operation and maintenance.....	14,662.84	12,156.68	206.55	203.01	44.63	27.07	52.20
Line transformer maintenance.....	1,516.69	848.83					
Meter maintenance.....	2,071.82	1,554.65					
Consumers' premises expenses.....							
Street light, operation and maintenance.....	4,971.80	4,488.78	48.75	72.95		108.91	59.65
Promotion of business.....	2,502.77	898.84					
Billing and collecting.....	4,596.63	4,417.28					
Gen. office—salaries and exp..	6,004.48	9,810.82	320.23	404.77	36.40	265.61	283.64
Undistributed expenses.....	2,424.56	2,949.39					
Interest.....	12,733.94	12,746.32	106.15	8.42		163.21	125.70
Sinking fund and principal payments on debentures..	6,233.89	6,434.58	114.22	120.50		202.09	213.19
Total expenses.....	112,757.21	150,946.08	3,821.82	3,432.98	721.02	3,542.37	2,858.15
Gross surplus.....	24,768.39	6,026.23	761.48	1,648.19		787.20	473.75
Gross loss.....					36.11		
Depreciation charge.....	14,403.50	9,297.00	281.00	177.00		256.00	160.00
Net surplus.....	10,364.89		480.48	1,471.19		531.20	313.75
Net loss.....		3,270.77			36.11		

a Four months' operation.

xa Operated by Municipal Council.

xb Hydro and Water Departments under one Commission.

"C"—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

St. Marys xb 4,039		St. Thomas 17,892		Sarnia 14,905		Scarboro Township xb	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
12,479.26	15,043.43	41,410.99	48,664.67	51,857.64	57,975.10	13,932.01	20,438.77
5,952.89	6,097.33	21,113.52	25,144.74	29,269.89	24,663.65	943.89	83.13
21,334.52	20,232.86	41,853.58	47,635.99	90,166.93	92,054.18	3,920.18	6,439.46
1,551.33	1,572.74	8,902.33	10,708.67				3,842.33
3,833.40	3,875.66	14,327.96	14,406.23	12,717.98	12,238.49	1,978.98	2,794.00
		3,361.78	3,914.71	9,410.96	9,009.25		
814.59	769.41	31.20	186.48	4,155.41	2,916.15		
45,965.99	47,591.43	131,001.36	150,661.49	197,578.81	198,856.82	22,774.16	33,597.69
28,024.07	29,892.70	62,070.55	84,689.06	86,888.58	113,844.26	5,749.72	9,742.20
1,348.86	1,358.43	5,655.23	5,953.73	6,201.47	7,104.17		
119.39	30.56	645.36	426.09	454.50	852.48		
822.96	1,708.68	4,350.18	5,804.06	4,569.88	5,688.97	2,475.73	5,635.55
725.95	111.99	445.70	261.30	1,534.22	823.12		
202.13	295.27	485.62	452.11	330.15	1,470.01		
		24.41					
675.44	922.36	3,716.27	2,669.89	4,236.01	3,917.76	473.03	321.18
			900.00				
285.62	284.98	3,816.25	4,636.47	3,939.02	4,049.26		
2,026.57	2,314.72	4,737.99	5,730.59	7,554.99	7,197.89	1,671.96	1,877.45
516.38	960.15	10,683.88	20,780.18	8,212.40	7,709.12		
1,387.68	2,428.35	281.34		15,186.22	15,921.14	4,652.00	5,329.24
2,332.21	2,824.99	5,197.45	5,107.51	9,357.95	9,911.86	1,193.73	1,271.32
38,467.26	43,133.18	102,110.23	137,410.99	148,465.39	178,490.04	16,216.17	24,176.94
7,498.73	4,458.25	28,891.13	13,250.50	49,113.42	20,366.78	4,557.99	9,420.75
4,264.12	2,914.47	12,282.00	9,325.00	12,937.00	9,662.00	2,995.00	2,195.00
2,234.61	1,543.78	16,609.13	3,925.50	36,176.42	10,704.78	1,562.99	7,225.75

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality	Seaforth		Simcoe		Springfield	
Population	1,950		3,951		432	
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	5,870.40	6,631.66	3,446.47	4,194.50	1,110.81	1,216.56
Commercial light.....	3,610.84	3,567.85	4,967.07	5,631.93	574.12	589.43
Commercial power.....	9,993.15	8,829.97	3,382.32	5,379.11	528.69	701.33
Municipal power.....			748.07	781.15		
Street light.....	1,688.00	1,702.00	3,266.32	2,846.65	800.00	800.00
Rural.....					44.64	
Miscellaneous.....	222.00					
Total.....	21,384.39	20,731.48	15,810.25	18,833.34	3,058.26	3,307.32
EXPENSES						
Power purchased.....	13,632.26	14,096.09	7,775.63	10,185.70	1,908.46	1,466.83
Substation operation.....						
Substation maintenance.....						
Distribution system, operation and maintenance.....	1,769.61	2,614.23	1,494.36	2,331.49	75.62	209.70
Line transformer maintenance.....			267.70	3.71		
Meter maintenance.....			9.30	102.52		
Consumers' premises expenses.....						
Street light, operation and maintenance.....	261.02	147.73	274.51	584.66	29.67	72.27
Promotion of business.....						
Billing and collecting.....						
Gen. office—salaries and exp..	972.79	1,257.69	843.63	873.46	252.95	244.94
Undistributed expenses.....		87.67		67.23		
Interest.....	418.17	626.66	1,318.11	1,481.20	235.08	160.07
Sinking fund and principal payments on debentures..	634.44	445.75		803.30	483.18	507.35
Total expenses.....	17,688.29	19,275.82	11,983.24	16,433.27	2,984.96	2,661.16
Gross surplus.....	3,696.10	1,455.66	3,827.01	2,400.07	73.30	646.16
Gross loss.....						
Depreciation charge.....	2,178.00	1,445.00	1,824.00	1,326.00		
Net surplus.....	1,518.10	10.66	2,003.01	1,074.07	73.30	646.16
Net loss.....						

a Included in Domestic Light. b Four months' operation.
 xa Operated by Municipal Council.
 xb Hydro and Water Departments under one Commission.

"C"—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Stamford Township xa		Stratford xb 17,611		Strathroy xb 2,627		Tavistock xb 1,003		Tecumseh b 1,019
1921	1922	1921	1922	1921	1921	1921	1922	1922
\$ 10,340.84 a 6,937.46 1,174.00 4.04	\$ 15,246.07 365.04 11,241.10 3,894.33	\$ 50,918.45 19,459.85 27,094.99 5,941.66 14,455.97 2,711.62 751.85	\$ 64,796.40 21,947.00 26,267.36 6,351.75 15,380.61 2,470.14 9,018.04	\$ 7,927.50 5,436.85 11,655.19 1,490.05 3,305.06 107.93	\$ 9,019.42 5,685.75 11,677.99 1,258.07 2,884.65 1,541.78	\$ 2,184.08 1,069.87 8,511.76 82.02 1,374.93 98.58	\$ 3,131.34 1,129.37 6,561.36 65.58 1,325.32 402.55	\$ 1,325.94 541.16 15.15 60.00
19,026.34	30,746.54	121,334.39	146,231.30	20,922.58	32,067.66	13,321.24	12,615.52	1,942.25
6,834.11	10,223.48	60,191.16 3,840.00 929.90	91,578.37 3,840.75 808.02	14,031.07	17,374.34	8,885.93	9,659.95	1,606.21
3,530.30	3,412.95	4,946.61 575.39 573.32	4,448.96 647.15 1,009.22	1,154.35	819.73	198.22	496.67	354.02
249.89	458.85	7,207.12	3,728.97	1,092.33	831.66	188.53	242.23	48.03
1,026.22	4,640.19	3,535.07 1,565.83	3,674.83 3,657.41	3,859.33	3,594.88	596.64	484.04	436.80
579.50	600.00	3,592.44	5,927.50	1,561.13	1,067.91	.....	.....	592.08
3,082.46	5,008.77	10,676.98	12,202.41	.....	.....	.....	.....	.....
1,398.95	2,298.44	4,002.36	5,722.36	1,848.01	1,678.65	109.77	115.26	.....
16,701.43	26,642.68	101,636.18	137,245.95	23,546.22	25,367.17	9,979.09	10,998.15	3,037.14
2,324.91	4,103.86	19,698.21	8,985.35	6,376.36	6,700.49	3,342.15	1,617.37	.....
.....	.....	.....	.....	.....	.....	.....	.....	1,994.89
2,237.00	1,748.00	14,275.00	11,188.00	2,500.00	1,631.00	515.00	334.00	.....
87.91	2,355.86	5,423.21	.....	3,876.36	5,069.49	2,827.15	1,283.37	.....
.....	.....	.....	2,202.65	.....	.....	.....	.....	1,094.89

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality Population	Thamesford P.V. xa		Thamesville xa 817		Thedford a 583	Thorndale P.V. xa	
Year	1921	1922	1921	1922	1922	1921	1922
EARNINGS							
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	1,127.26	1,274.53	2,907.81	3,030.28	1,027.74	989.21	1,056.69
Commercial light.....	1,003.40	1,228.33	2,578.52	2,179.75	686.87	743.97	668.49
Commercial power.....	4,009.68	4,211.07	2,556.55	3,161.15	365.28	2,102.43	1,838.18
Municipal power.....							
Street light.....	532.67	510.00	1,256.85	1,150.40	975.00	416.00	468.00
Rural.....							
Miscellaneous.....	11.12	10.30					
Total.....	6,684.13	7,234.23	9,299.73	9,521.58	3,054.89	4,251.61	4,031.36
EXPENSES							
Power purchased.....	4,622.18	4,498.92	3,719.25	3,633.36	2,075.89	3,890.74	2,898.67
Substation operation.....							
Substation maintenance.....							
Distribution system, operation and maintenance.....	130.44	311.04	310.84	388.08	111.64	44.12	202.53
Line transformer maintenance.....							
Meter maintenance.....							
Consumers' premises expenses.....							
Street light, operation and maintenance.....	65.83	51.11	44.79	59.16	34.60	123.49	
Promotion of business.....							
Billing and collecting.....							
Gen. office—salaries and exp... Undistributed expenses.....	241.16	214.88	385.76	442.95	161.07	126.20	130.51
Interest.....	243.85	234.04	507.09	412.18	218.47	179.31	191.95
Sinking fund and principal payments on debentures...	227.01	240.18	322.86	337.89	448.55	126.53	133.65
Total expenses.....	5,530.47	5,550.17	5,290.59	5,273.62	3,050.22	4,490.39	3,557.31
Gross surplus.....	1,153.66	1,684.06	4,009.14	4,247.96	4.67		474.05
Gross loss.....						238.78	
Depreciation charge.....	382.00	252.00	572.00	356.00		197.00	124.00
Net surplus.....	771.66	1,432.06	3,437.14	3,891.96	4.67		350.05
Net loss.....						435.78	

xa Operated by Municipal Council.

a Six months' operation.

STATEMENT
Comparative Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality Population	Toronto Township		Vaughan Township xi		Walkerville s 7,303	
	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....			1,145.99	1,436.54	41,133.16	60,340.85
Commercial light.....			234.78	320.49	18,365.76	19,991.66
Commercial power.....			2,633.87	2,581.59	112,665.36	135,181.47
Municipal power.....						
Street light.....			238.00	238.00	4,473.29	6,138.44
Rural.....	25,042.87	27,068.08	943.75	875.98	27,300.37	27,300.37
Miscellaneous.....					1,903.75	3,174.19
Total.....	25,042.87	27,068.08	5,196.39	5,452.60	205,841.71	224,826.61
EXPENSES						
Power purchased.....	6,629.82	8,862.66	1,775.52	2,194.70	118,454.99	147,552.26
Substation operation.....					7,459.96	7,529.71
Substation maintenance.....					133.68	92.91
Distribution system, operation and maintenance.....	1,909.71	3,513.76	177.09	123.45	4,807.22	3,448.25
Line transformer maintenance.....					2,095.27	2,334.09
Meter maintenance.....					2,454.21	1,540.71
Consumers' premises expenses.....						
Street light, operation and maintenance.....			33.50	49.96	2,187.10	2,435.05
Promotion of business.....						
Billing and collecting.....					5,418.66	8,377.74
Gen. office—salaries and exp..	1,187.97	1,303.60	164.11	358.41	11,599.59	11,442.74
Undistributed expenses.....					6,652.52	6,474.81
Interest.....	3,914.72	408.58	2,352.69	2,365.59	10,957.59	12,991.71
Sinking fund and principal payments on debentures..	436.55	462.75	233.71	248.90	5,372.43	7,151.27
Total expenses.....	14,078.77	14,551.35	4,736.62	5,341.01	177,593.22	211,371.25
Gross surplus.....	10,964.10	12,516.73	459.77	111.59	28,248.49	13,455.36
Gross loss.....						
Depreciation charge.....	4,419.00	2,507.00	1,234.00	720.00	11,946.44	5,044.00
Net surplus.....	6,545.10	10,009.73			16,302.05	8,411.36
Net loss.....			774.23	608.41		

xa Operated by Municipal Council.
xb Hydro and Water Departments under one Commission.
s Includes Sandwich and Ford.
xi Operated by St. Catharines.

“C”—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Wallaceburg xb 3,912		Wardsville xa 212		Waterdown xa 815		Waterford xa 1,112	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c. 11,703.39	\$ c. 12,308.24	\$ c. 315.80	\$ c. 794.73	\$ c. 2,353.26	\$ c. 2,488.49	\$ c. 2,957.14	\$ c. 3,190.10
7,363.40	6,886.10	147.66	382.33	664.53	613.00	1,135.31	1,162.48
24,881.34	32,014.91			1,137.73	1,075.13	2,493.18	3,678.35
1,312.11	1,150.80						
2,953.30	2,603.96	398.75	870.00	620.00	660.00	1,333.02	1,402.80
				3,726.03	4,097.14	885.85	922.89
						88.19	185.80
48,213.54	54,964.01	862.21	2,047.06	8,501.55	8,933.76	8,897.68	10,542.42
21,486.10	28,465.30	321.84	1,001.46	3,971.59	4,915.44	4,374.55	5,991.82
105.10	177.15						
2,390.67	289.75		13.38	260.42	803.37	245.78	502.22
602.02	1,382.57						
109.80	181.69						
754.11	853.95		50.37	137.96	148.62	288.35	236.90
4,358.89	5,404.66	52.89	40.00	674.00	673.18	590.24	885.66
909.41	1,667.66					837.58	676.42
3,155.52	2,705.66	65.03	453.65	894.17	910.15		
1,403.26	1,484.01		217.48	442.81	466.45	1,285.86	
35,274.88	42,612.40	439.76	1,776.34	6,380.95	7,917.21	7,622.36	8,293.02
12,938.66	12,351.61	422.45	270.72	2,120.60	1,016.55	1,275.32	2,249.40
2,784.00	1,746.00		120.00	1,306.00	591.00	592.00	665.00
10,154.66	10,605.61	422.45	150.72	814.60	425.55	683.32	1,584.40

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

NIAGARA
SYSTEM—Continued

Municipality Population	Waterloo ^{xd} 5,976		Watford 1,039		Welland 8,880	
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.	14,931.02	19,267.15	2,873.44	3,118.16	18,307.67	21,657.48
Commercial light.	7,125.48	8,090.25	2,620.52	2,880.90	5,955.83	5,827.96
Commercial power.	23,198.54	29,144.79	2,808.30	3,227.88	43,112.95	42,586.24
Municipal power.	3,683.87	3,963.89				
Street light.	5,840.59	6,224.60	1,638.45	1,604.40	6,061.35	7,320.98
Rural.	1,716.73				7,886.97	
Miscellaneous.		1,431.14	9.27		1,540.82	613.75
Total.	56,496.23	68,121.82	9,949.98	10,831.34	82,865.59	78,006.41
EXPENSES						
Power purchased.	29,065.23	41,609.43	5,456.37	4,847.36	33,834.50	45,149.19
Substation operation.	2,211.59	2,460.08			3,320.56	3,447.10
Substation maintenance.	72.86	45.06			377.91	187.41
Distribution system, operation and maintenance.	2,178.10	1,386.06	860.96	447.95	3,880.62	1,974.67
Line transformer maintenance.	58.04	96.66			480.48	221.11
Meter maintenance.	197.35	246.13			299.60	350.03
Consumers' premises expenses.						
Street light, operation and maintenance.	1,858.76	1,529.23	90.53	202.02	2,411.44	902.70
Promotion of business.						
Billing and collecting.	1,706.41	1,694.28			963.84	1,023.10
Gen. office—salaries and exp. .	5,078.87	4,943.42	492.82	421.92	6,228.91	6,584.47
Undistributed expenses.	312.50	448.24			3,075.47	2,822.42
Interest.	4,647.33	5,113.54	560.21	464.64	12,696.33	14,726.77
Sinking fund and principal payments on debentures. .	2,740.29	2,871.85	374.83	395.44	4,122.33	5,073.79
Total expenses.	50,127.33	62,443.98	7,835.72	6,779.33	71,691.99	82,462.76
Gross surplus.	6,368.90	5,677.84	2,114.26	4,052.01	11,173.60	
Gross loss.						4,456.35
Depreciation charge.	7,176.87	4,961.73	575.00	362.00	8,555.00	6,322.00
Net surplus.		716.11	1,539.26	3,690.01	2,618.60	
Net loss.	807.97					10,778.35

a Municipal Railway.

xa Operated by Municipal Council.

xb Hydro and Water Departments under one Commission.

xd Hydro, Water and Gas Departments under one Commission.

“ C ”—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Wellesley Police Vil.		West Lorne xa 803		Weston xb 3,299		Windsor 38,530	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,065.38	1,218.98	1,630.54	1,707.26	10,086.61	14,808.44	181,822.04	210,050.86
568.02	626.02	1,356.84	1,469.24	2,183.96	2,484.85	99,612.26	103,421.01
4,003.07	4,332.93	6,008.65	6,413.57	17,419.31	25,887.91	133,944.32	199,445.92
.....	.....	.....	.....	1,638.35	1,849.24	12,780.61	15,996.93
741.96	767.14	1,378.73	1,190.04	3,068.22	5,220.67	39,245.57	44,435.25
.....	.....	.....	.....	1,396.86	.....	a 46,458.86	1,488.69
.....	.....	.....	.....	275.22	160.12	.....	.....
6,378.43	6,945.07	10,374.76	10,780.11	36,068.53	50,411.23	513,863.66	574,838.66
.....
4,698.61	5,852.66	5,584.68	7,003.42	22,696.37	36,582.35	203,714.88	288,794.12
.....	.....	.....	.....	.....	.....	33,685.88	31,628.24
.....	.....	.....	.....	.....	.....	6,695.91	6,488.24
246.20	202.08	129.36	82.32	3,667.95	5,798.25	28,671.51	20,959.71
.....	.....	.....	.....	.....	.....	9,077.10	2,201.50
.....	.....	.....	.....	.....	.....	4,762.13	3,553.29
.....	.....	.....	.....	.....	.....	3,729.92	5,551.36
41.00	170.32	87.66	147.53	312.61	484.98	26,591.19	22,810.02
.....	.....	.....	.....	.....	.....	210.96	880.18
.....	.....	.....	.....	.....	.....	18,122.37	20,534.47
485.75	500.70	652.51	690.24	2,371.63	2,743.41	18,514.01	21,793.37
.....	.....	.....	.....	73.00	.....	23,639.73	10,199.33
326.49	267.56	380.19	225.12	858.50	587.73	31,057.60	46,296.78
242.82	272.84	127.76	135.41	385.27	789.81	20,873.74	19,719.42
6,040.87	7,266.16	6,962.16	8,284.04	30,365.33	46,986.53	429,346.93	501,410.03
337.56	.....	3,412.60	2,496.07	5,703.20	3,424.70	84,516.73	73,428.63
.....	321.09	.....	.....	.....	.....	.....	.....
330.00	218.00	474.00	283.00	3,812.00	2,546.00	23,440.00	20,004.00
7.56	.....	2,938.60	2,213.07	1,891.20	878.70	61,076.73	53,424.63
.....	539.09	.....	.....	.....	.....	.....	.....

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

NIAGARA SYSTEM—Concluded

Municipality	Woodbridge		Woodstock	
Population	679		xb	10,164
Year	1921	1922	1921	1922
EARNINGS				
	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	1,296.84	1,538.54	25,130.13	32,422.51
Commercial light.....	748.34	854.75	15,988.83	19,033.09
Commercial power.....	3,411.24	3,945.84	25,836.54	30,539.85
Municipal power.....			2,518.93	2,473.07
Street light.....	916.00	825.00	6,772.97	6,712.08
Rural.....	66.93	79.65		
Miscellaneous.....	5.69		1,646.38	1,652.88
Total.....	6,445.04	7,243.78	77,893.78	92,833.48
EXPENSES				
Power purchased.....	3,802.81	4,612.47	40,036.09	58,480.15
Substation operation.....			278.78	2,565.46
Substation maintenance.....			2,467.95	398.60
Distribution system, operation and maintenance.....	186.22	348.48	2,576.12	6,318.78
Line transformer maintenance.....				
Meter maintenance.....			982.17	403.21
Consumers' premises expenses.....				
Street light, operation and maintenance.....	128.25	205.64	1,327.82	1,188.67
Promotion of business.....				
Billing and collecting.....			2,885.06	3,229.53
Gen. office—salaries and exp..	385.34	416.60	4,026.69	3,590.11
Undistributed expenses.....			1,698.09	3,464.75
Interest.....	263.64	101.24	2,848.84	3,168.23
Sinking fund and principal payments on debentures..	153.37	161.80	1,590.60	1,590.60
Total expenses.....	4,919.63	5,846.23	60,718.21	84,398.09
Gross surplus.....	1,525.41	1,397.55	17,175.57	8,435.39
Gross loss.....				
Depreciation charge.....	598.00	403.00	8,752.00	6,414.00
Net surplus.....	927.41	994.55	8,423.57	2,021.39
Net loss.....				

xa Operated by Municipal Council.

xb Hydro and Water Departments under one Commission.

“ C ”—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Wyoming xa 489		Zurich, Police Village xa		NIAGARA SYSTEM SUMMARY	
1921	1922	1921	1922	1921	1922
\$ c. 1,550.65 1,226.83 747.17 960.00 4,484.65	\$ c. 1,696.84 1,218.89 628.67 960.00 4,504.40	\$ c. 954.55 1,009.12 2,343.29 975.00 5,281.96	\$ c. 1,062.95 1,132.66 2,172.10 900.00 5,267.71	\$ c. 2,536,647.29 1,449,932.22 3,185,841.06 551,937.51 824,086.75 141,205.05 214,769.34 8,904,419.22	\$ c. 3,074,918.02 1,697,884.42 3,603,839.99 860,294.98 903,548.16 100,413.36 167,016.90 10,407,875.83
2,091.69 126.21 231.64 285.27 550.71 370.98 3,656.50 828.15 400.00 428.15	2,409.63 160.11 162.54 331.18 548.21 393.30 4,004.97 499.43 246.00 253.43	4,001.87 18.33 91.38 311.22 141.04 91.79 4,655.63 626.33 276.00 350.33	3,517.11 52.48 83.26 302.17 60.16 96.83 4,112.01 1,155.70 167.00 988.70	3,739,893.93 265,965.88 88,729.52 365,628.16 58,093.74 97,677.50 134,845.71 236,217.38 90,627.02 274,319.23 549,415.22 279,226.33 820,414.08 430,364.84 7,431,418.54 1,473,000.68 892,890.83 580,109.85	5,456,782.63 270,704.75 92,474.92 395,931.92 45,734.42 88,439.19 143,388.88 237,511.53 119,289.10 292,533.72 502,128.42 342,859.98 890,579.31 523,072.44 9,401,431.21 1,006,444.62 600,114.20 406,330.42

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

SEVERN SYSTEM

Municipality	Alliston		Barrie		Beeton	
Population	1,321		6,888		586	
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	5,253.63	5,554.85	16,926.24	19,647.34	1,753.33	2,107.96
Commercial light.....	3,375.50	3,239.50	8,227.70	9,191.01	1,242.18	1,408.90
Commercial power.....	2,982.43	1,285.05	8,665.13	9,125.77	4,507.27	3,802.85
Municipal power.....	584.76	511.14	1,930.02	1,345.73		
Street light.....	1,998.00	1,998.00	3,919.31	3,841.29	1,240.00	1,240.00
Rural.....						
Miscellaneous.....		174.00	5,252.73	4,701.81		
Total.....	14,194.32	12,762.54	44,921.13	47,852.95	8,742.78	8,559.71
EXPENSES						
Power purchased.....	8,947.66	6,105.99	27,450.40	25,093.01	7,233.30	5,354.76
Substation operation.....						
Substation maintenance.....						
Distribution system, operation and maintenance.....	893.86	813.81	1,011.43	1,698.86	48.07	31.09
Line transformer maintenance.....			244.42	708.62		
Meter maintenance.....			771.14	1,416.02		
Consumers' premises expenses.....						
Street light, operation and maintenance.....	239.18	176.08	1,250.49	735.52	100.44	5.30
Promotion of business.....						
Billing and collecting.....						
Gen. office—salaries and exp.....	895.88	778.11	3,519.03	4,056.60	319.11	280.07
Undistributed expenses.....			1,071.89	1,619.56		
Interest.....	2,978.74	2,879.69	1,488.40	1,400.10	984.94	887.69
Sinking fund and principal payments on debentures.....	665.04	707.17	1,988.53	2,076.83	248.91	261.36
Total expenses.....	14,620.36	11,460.85	38,795.73	38,805.12	8,934.77	6,820.27
Gross surplus.....		1,301.69	6,125.40	9,047.83		1,739.44
Gross loss.....	426.04				191.99	
Depreciation charge.....	1,364.00	800.00	4,486.00	2,738.00	604.00	352.00
Net surplus.....		501.69	1,639.40	6,309.83		1,387.44
Net loss.....	1,790.04				795.99	

xa Operated by Municipal Council.

xb Hydro and Water Departments under one Commission.

"C"—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Bradford 1,028		Coldwater 647		Collingwood 6,237		Cookstown Police Vil. xa	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c. 2,522.29	\$ c. 3,032.09	\$ c. 1,705.16	\$ c. 1,959.10	\$ c. 16,194.56	\$ c. 18,019.16	\$ c. 1,797.47	\$ c. 1,965.07
1,822.52	1,844.21	1,306.92	1,415.30	8,511.75	9,843.69	705.24	700.17
1,310.02	1,370.88	2,079.61	2,575.81	16,818.64	26,714.07	1,890.50	1,270.01
.....	.....	.....	.....	1,891.99	2,185.06	.....	.....
1,481.00	1,474.20	616.00	616.00	3,999.16	4,045.00	1,123.40	1,121.40
.....
.....	.....	.....	.....	69.72	422.88	.....	.....
7,136.53	7,721.38	5,707.69	6,566.21	47,485.82	61,229.86	5,516.61	5,056.65
.....
6,054.39	4,876.40	3,087.48	2,738.94	44,861.16	42,013.01	3,317.35	2,185.33
.....	.....	.....	.....	3.40	27.10	.....	.....
.....	.....	.....	.....	4.95	.....	.....	.....
219.85	462.35	477.34	462.85	1,069.38	1,102.88	225.27	123.12
.....	.....	.....	.....	7.96	35.96	.....	.....
.....	.....	.....	.....	78.79	7.61	.....	.....
.....
143.83	64.26	28.12	46.32	352.93	550.32	229.65	19.44
.....
412.03	299.24	161.71	163.36	1,953.40	1,819.73	.....	.....
.....	.....	.....	.....	3,336.97	3,286.74	157.02	341.08
.....	.....	.....	.....	459.57	219.44	.....	.....
1,517.19	1,259.83	459.59	363.25	510.08	28.25	893.16	784.06
.....
204.85	218.16	140.58	148.31	1,575.38	1,652.38	132.92	141.56
.....
8,552.14	7,180.24	4,384.82	3,923.03	54,213.97	50,743.42	4,955.27	3,594.59
.....	541.14	1,322.87	2,643.18	.....	10,486.44	561.34	1,262.06
1,415.61	.....	.....	.....	6,728.15	.....	.....	.....
765.00	452.00	518.00	356.00	3,924.00	2,750.00	517.00	302.00
.....	89.14	804.87	2,287.18	.....	7,736.44	44.34	1,160.06
2,180.61	.....	.....	.....	10,652.15	.....	.....	.....

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

SEVERN
SYSTEM—Continued

Municipality Population	Creemore xa 540		Elmvale Police Vil. xa		Midland xb 7,022	
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	1,808.03	1,811.54	1,491.09	1,628.91	20,140.29	22,913.75
Commercial light.....	1,683.94	1,506.73	1,501.27	1,437.30	8,618.18	9,754.04
Commercial power.....	1,422.65	1,425.85	4,239.56	3,796.04	20,964.55	28,269.10
Municipal power.....					1,500.00	2,971.44
Street light.....	823.79	880.08	756.00	756.00	4,506.00	4,743.50
Rural.....						
Miscellaneous.....					367.00	
Total.....	5,738.31	5,624.20	7,987.92	7,618.25	56,096.02	68,651.83
EXPENSES						
Power purchased.....	3,494.32	3,125.57	5,730.10	4,666.77	33,310.92	36,557.58
Substation operation.....					1,767.89	1,900.29
Substation maintenance.....					218.63	151.40
Distribution system, operation and maintenance.....	214.14	27.29	458.61	671.39	1,528.01	1,549.50
Line transformer maintenance.....					87.58	36.63
Meter maintenance.....					142.40	259.26
Consumers' premises expenses.....						
Street light, operation and maintenance.....	78.40	81.61	69.81	155.66	453.37	324.24
Promotion of business.....						95.77
Billing and collecting.....					532.10	831.11
Gen. office—salaries and exp.....	134.06	173.20	297.32	337.89	3,287.55	2,810.41
Undistributed expenses.....					480.99	1,023.21
Interest.....	242.05	150.26	262.59	158.17	4,643.45	2,681.54
Sinking fund and principal payments on debentures.....	250.64	265.68	155.66	163.46	2,554.45	2,686.51
Total expenses.....	4,413.61	3,823.61	6,974.09	6,153.34	49,007.34	50,907.45
Gross surplus.....	1,324.70	1,800.59	1,013.83	1,464.91	7,088.68	17,744.38
Gross loss.....						
Depreciation charge.....	387.00	241.00	547.00	350.00	5,664.00	3,785.00
Net surplus.....	937.70	1,559.59	466.83	1,114.91	1,424.68	13,959.38
Net loss.....						

xa Operated by Municipal Council.

xb Hydro and Water Departments under one Commission.

"C"—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Penetang xb 3,920		Port McNicoll xa 576		Stayner 1,004		Thornton Police Vil. xa	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
6,714.63	7,403.45	1,879.68	2,204.69	2,534.35	2,707.30	688.24	786.81
3,798.95	3,772.70	692.07	964.67	2,301.30	2,246.55	306.20	330.93
17,779.06	17,653.87	109.77	98.90	3,006.88	2,433.27		
1,866.14	2,175.69						
2,566.00	2,561.00	570.00	570.00	1,008.00	1,192.00	577.50	708.75
19.85	32.74						
32,744.63	33,599.45	3,251.52	3,658.26	8,850.53	8,579.12	1,571.94	1,826.49
22,367.18	18,990.08	1,541.88	1,108.48	5,307.43	4,523.72	1,420.00	1,094.43
1,110.75	1,199.87						
381.19	376.85	131.60	102.10	494.20	277.72	16.77	36.08
258.71	174.98						
79.93	34.60						
418.68	215.17	45.34	95.13	10.33	202.14	36.97	
254.00	266.90						
2,077.72	1,557.93	239.97	125.91	327.62	230.94	79.12	77.28
	1,063.86			26.73			
1,617.65	1,113.65	611.91	508.23	638.16	465.24	465.25	588.49
866.05	905.89	181.90	252.04	539.48	571.85	211.24	137.46
29,431.86	25,899.78	2,752.60	2,191.89	7,343.95	6,271.61	2,229.35	1,933.74
3,312.77	7,699.67	498.92	1,466.37	1,506.58	2,307.51		
						657.41	107.25
2,968.00	1,984.00	340.00	202.00	686.00	433.00	312.00	181.00
344.77	5,715.67	158.92	1,264.37	820.58	1,874.51		
						98.41	288.25

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

SEVERN
SYSTEM—Concluded

Municipality Population	Tottenham xa 512		Victoria Harbor xa 1,485		Waubauskene P.V. xa	
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light	2,181.09	2,479.22	1,593.60	1,943.27	1,324.12	1,368.50
Commercial light	1,335.34	1,445.59	1,607.34	1,769.22	640.36	557.83
Commercial power	146.42	518.15			112.73	167.97
Municipal power	71.15	97.44				
Street light	1,029.00	1,225.00	680.00	671.00	360.00	420.00
Rural						
Miscellaneous						
Total	4,763.00	5,765.40	3,880.94	4,383.49	2,437.21	2,514.30
EXPENSES						
Power purchased	4,183.18	3,492.24	2,120.97	1,821.92	1,256.89	913.50
Substation operation						
Substation maintenance						
Distribution system, operation and maintenance	289.81	266.99	358.13	195.62	6.50	17.26
Line transformer maintenance						36.46
Meter maintenance						11.25
Consumers' premises expenses						
Street light, operation and maintenance	117.01	111.77	64.22	23.02	26.00	11.03
Promotion of business						
Billing and collecting						
Gen. office—salaries and exp.	145.21	91.07	420.98	380.04	307.81	270.65
Undistributed expenses						
Interest	735.63	756.63	281.95	218.51	178.26	150.91
Sinking fund and principal payments on debentures	564.99	582.17	243.63	257.04	127.32	134.97
Total expenses	6,035.83	5,300.87	3,489.88	2,896.15	1,902.78	1,546.03
Gross surplus		464.53	391.06	1,487.34	534.43	968.27
Gross loss	1,272.83					
Depreciation charge	437.00	256.00	352.00	219.48	202.00	120.00
Net surplus		208.53	39.06	1,267.86	332.43	848.27
Net loss	1,709.83					

xa Operated by Municipal Council.

xb Hydro and Water Departments under one Commission.

‘ C ’—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

SEVERN SYSTEM SUMMARY		EUGENIA SYSTEM					
		Arthur 1,222		Chatsworth xa 287		Chesley xb 1,803	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
86,508.50	97,353.01	2,368.81	2,811.99	985.81	1,180.48	5,352.03	5,894.11
47,676.76	51,428.34	2,699.10	2,911.14	786.28	789.95	3,523.13	4,301.33
86,035.22	100,507.59	5,013.98	4,325.59	619.31	573.88	6,928.79	7,441.34
7,844.06	9,286.50					789.03	1,382.57
27,253.06	28,063.22	1,317.98	1,523.72	448.00	448.00	1,527.19	1,714.67
5,709.30	5,331.43					50.91	61.54
261,026.90	291,970.09	11,399.87	11,572.44	2,839.40	2,992.31	18,171.08	20,795.56
181,684.51	164,661.73	10,829.32	8,893.10	1,766.98	1,580.76	11,744.97	12,013.39
2,882.04	3,127.26						
223.58	151.40						
7,824.16	8,215.76	199.27	146.19	216.31	52.57	797.28	608.53
598.67	992.65						
1,072.26	1,728.74						
3,694.77	2,817.01	204.77	236.82	62.00	58.13	89.65	184.37
	95.77						
2,739.50	2,917.74						
16,119.11	15,260.52	533.68	549.96	136.13	169.40	597.49	695.95
2,039.18	3,926.07						
20,497.53	14,394.50	1,810.16	1,750.55	384.89	354.43	1,654.28	1,371.01
8,663.04	11,162.84	319.98	339.17	175.34	177.77	998.92	1,055.42
248,038.35	229,451.99	13,897.18	11,915.79	2,741.65	2,393.06	15,882.59	15,928.67
12,988.55	62,518.10			97.75	599.25	2,288.49	4,866.89
		2,497.31	343.35				
24,073.00	15,521.48	979.00	597.00	233.00	144.00	1,189.00	732.00
	46,996.62				455.25	1,099.49	4,134.89
11,084.45		3,476.31	940.35	135.25			

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

EUGENIA
SYSTEM—Continued

Municipality Population	Dundalk xa 725		Durham 1,622		Elmwood Police Vil. xa	
	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	1,597.79	1,869.84	4,071.98	4,480.34	762.83	792.14
Commercial light.....	1,680.40	1,821.35	2,774.44	3,068.96	545.58	528.92
Commercial power.....	2,558.03	2,328.20	8,893.04	14,269.06	1,802.31	1,345.94
Municipal power.....						
Street light.....	882.00	1,042.50	1,410.50	1,488.00	548.29	540.50
Rural.....						
Miscellaneous.....	40.43					
Total.....	6,758.65	7,061.89	17,149.96	23,306.36	3,659.01	3,207.50
EXPENSES						
Power purchased.....	4,575.06	3,614.71	10,358.25	11,867.64	2,650.67	1,681.31
Substation operation.....						
Substation maintenance.....						
Distribution system, operation and maintenance.....	125.25	124.72	632.62	300.36	17.91	1.90
Line transformer maintenance.....						
Meter maintenance.....						
Consumers' premises expenses.....						
Street light, operation and maintenance.....	79.65	103.80	267.18	149.05	49.69	38.46
Promotion of business.....				91.33		
Billing and collecting.....						
Gen. office—salaries and exp..	224.00	234.62	1,004.14	1,125.71	93.83	166.31
Undistributed expenses.....						
Interest.....	328.33	222.71	1,201.52	1,366.05	479.39	431.21
Sinking fund and principal payments on debentures..	187.45	197.75	644.54	1,274.97	211.76	217.26
Total expenses.....	5,519.74	4,498.31	14,108.25	16,175.11	3,503.25	2,536.45
Gross surplus.....	1,238.91	2,563.58	3,041.71	7,131.25	155.76	671.05
Gross loss.....						
Depreciation charge.....	404.00	249.00	1,071.00	667.00	272.00	153.00
Net surplus.....	834.91	2,314.58	1,970.71	6,464.25		518.05
Net loss.....					116.24	

xa Operated by Municipal Council.

xb Hydro and Water Departments under one Commission.

"C"—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Flesherton 410		Grand Valley 582		Hanover xb 2,695		Holstein Police Vil. xa	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,585.13	1,791.37	2,202.44	2,493.03	8,978.84	10,616.67	510.16	653.43
1,278.80	1,466.00	2,157.32	2,262.67	4,807.51	5,168.56	472.86	610.52
446.07	425.76	1,869.20	1,786.85	39,475.98	45,903.15	215.76	172.68
644.00	736.00	970.60	1,066.06	2,720.69	2,961.78	296.32	469.98
		13.64	3.31				
3,954.00	4,419.13	7,213.20	7,611.92	55,983.02	64,650.16	1,495.10	1,906.67
2,765.44	2,252.82	3,883.65	3,990.73	39,888.41	41,083.87	1,788.06	1,238.70
173.17	52.10	63.16	23.64	3,690.86	4,853.17	.....	82.76
71.70	98.00	96.00	115.12	127.15	259.69	30.19	37.84
267.38	252.21	263.23	282.68	2,075.96	1,724.23	124.50	83.85
498.52	469.91	654.62	503.52	4,066.89	4,503.31	309.70	297.78
105.65	143.56	377.52	400.17	2,235.12	2,782.79	112.45	118.63
3,881.86	3,268.60	5,338.18	5,315.86	52,084.39	55,207.06	2,364.90	1,859.56
72.14	1,150.53	1,875.02	2,296.06	3,898.63	9,443.10	.....	49.11
						869.80	.....
309.00	187.00	515.00	312.00	3,056.00	1,946.00	124.00	74.00
	963.53	1,360.00	1,984.06	842.63	7,497.10	.....	.....
236.86						993.80	26.89

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

EUGENIA
SYSTEM—Continued

Municipality	Kincardine		Lucknow		Markdale	
Population	xb 2,159		xa 887		908	
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	3,742.64	6,461.15	1,444.43	2,679.21	2,496.08	2,623.46
Commercial light.....	2,179.51	4,057.97	1,551.66	2,527.54	1,550.66	1,695.41
Commercial power.....	357.48	1,801.91	1,063.91	2,025.62	1,414.47	1,172.56
Municipal power.....		1,149.06				
Street light.....	2,545.07	3,593.00	1,256.67	1,537.00	910.78	978.00
Rural.....					178.86	
Miscellaneous.....						
Total.....	8,824.70	17,063.09	5,316.67	8,769.37	6,550.85	6,469.43
EXPENSES						
Power purchased.....	7,061.19	9,929.74	4,454.69	4,983.99	3,232.18	2,786.11
Substation operation.....						
Substation maintenance.....						
Distribution system, operation and maintenance.....	1,959.62	1,379.39	44.77	113.61	144.23	121.30
Line transformer maintenance.....						
Meter maintenance.....						
Consumers' premises expenses.....						
Street light, operation and maintenance.....	53.82	147.10	25.27	34.00	43.90	62.15
Promotion of business.....						
Billing and collecting.....						
Gen. office—salaries and exp..	2,573.79	3,001.90	262.80	412.56	587.90	598.93
Undistributed expenses.....					66.42	
Interest.....	2,328.37	3,494.88	814.99	1,072.69	764.27	690.26
Sinking fund and principal payments on debentures..	1,087.38	1,292.62	262.17	521.25	152.42	161.47
Total expenses.....	15,064.17	19,245.63	5,864.69	7,138.10	4,991.32	4,420.22
Gross surplus.....				1,631.27	1,559.53	2,049.21
Gross loss.....	6,239.47	2,182.54	548.02			
Depreciation charge.....		1,046.00		366.00	600.00	387.00
Net surplus.....				1,265.27	959.53	1,662.21
Net loss.....	6,239.47	3,228.54	548.02			

xa Operated by Municipal Council.

xb Hydro and Water Departments under one Commission.

“ C ”—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Mount Forest xb 1,761		Neustadt 445		Orangeville 2,503		Owen Sound xb 12,360	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
4,050.74	4,683.40	1,159.34	1,683.22	3,660.49	4,207.55	26,511.72	31,744.31
5,279.82	5,965.31	737.47	982.18	3,707.47	4,231.79	16,442.16	18,851.65
3,750.47	3,479.12	3,214.94	7,690.74	3,869.74	4,871.52	29,116.14	31,725.54
1,468.95	1,517.37			342.00	342.00		
2,302.74	2,664.43	975.00	975.00	3,810.40	3,844.10	11,270.75	11,612.50
107.24				193.27	83.27		176.73
16,959.97	18,309.63	6,086.75	11,331.14	15,583.37	17,580.23	83,340.77	94,110.73
12,830.19	9,565.82	7,107.25	7,323.98	9,319.36	10,886.16	56,720.95	53,112.06
						4,142.68	1,444.38
1,223.59	919.02	137.74	66.74	1,499.48	1,418.54	4,144.46	4,762.97
						1,297.50	434.23
						42.21	360.29
229.58	173.17	225.58	107.16	304.80	303.61	2,594.75	1,649.13
						2,433.63	2,465.52
1,451.73	718.03	199.17	237.53	517.25	592.24	6,009.91	6,793.25
						1,135.16	615.40
1,615.73	1,406.83	803.34	1,455.36	1,891.67	1,743.45	1,864.53	1,709.17
786.52	822.54	529.88	557.99	1,213.08	1,506.81	7,763.83	7,972.25
18,137.34	13,605.41	9,002.96	9,748.76	14,745.64	16,450.81	88,149.61	81,318.65
	4,704.22		1,582.38	837.73	1,129.42		12,792.08
1,177.37		2,916.21				4,808.84	
1,203.00	746.00	611.00	371.00	1,497.00	866.00	6,392.67	4,109.56
	3,958.22		1,211.38		263.42		8,682.52
2,380.37		3,527.21		659.27		11,201.51	

STATEMENT
Comparative Detailed Operating Reports of Electrical Departments of

EUGENIA
SYSTEM—Concluded

Municipality Population	Priceville Police Vil. xa		Ripley Police Village		Shelburne xb 1,101	
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
Domestic light.	\$ 211.50	\$ 356.45	\$ 855.57	\$ 1,312.40	\$ 3,754.83	\$ 4,441.32
Commercial light.	117.80	180.10	922.75	1,598.21	2,862.25	2,829.00
Commercial power.			2,244.98	1,618.29	4,068.30	2,984.16
Municipal power.					391.99	445.78
Street light.	315.00	472.50	1,080.00	1,296.00	1,327.05	1,365.00
Rural.				78.74		
Miscellaneous.						
Total.	644.30	1,009.05	5,103.30	5,903.64	12,404.42	12,065.26
EXPENSES						
Power purchased.	507.72	597.87	4,354.38	4,689.78	7,945.42	6,833.34
Substation operation.						
Substation maintenance.						
Distribution system, operation and maintenance.		17.39	24.19	40.48	349.96	53.80
Line transformer maintenance.						
Meter maintenance.						
Consumers' premises expenses.						
Street light, operation and maintenance.	3.50	3.50		133.20	15.00	74.53
Promotion of business.						
Billing and collecting.						
Gen. office—salaries and exp.	14.10	25.00	237.22	312.63	478.63	650.17
Undistributed expenses.						
Interest.	185.62	415.16	544.11	835.80	1,205.63	977.66
Sinking fund and principal payments on debentures.	163.10	248.75	201.12	213.19	727.16	773.07
Total expenses.	874.04	1,307.67	5,361.02	6,225.08	10,722.03	9,362.57
Gross surplus.					1,682.39	2,702.69
Gross loss.	229.74	298.62	257.72	321.44		
Depreciation charge.		110.00		247.00	886.00	559.00
Net surplus.					796.39	2,143.69
Net loss.	229.74	409.62	257.72	568.44		

xa Operated by Municipal Council.
xb Hydro and Water Departments under one Commission.

"C"—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Tara 521		Teeswater 838		Wingham xb 2,470		EUGENIA SYSTEM SUMMARY	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c. 1,824.49	\$ c. 2,226.18	\$ c. 1,803.67	\$ c. 2,695.66	\$ c. 9,381.46	\$ c. 7,072.58	\$ c. 89,312.78	\$ c. 104,770.29
1,787.89	1,977.69	1,116.98	1,480.98	4,348.31	7,648.64	63,330.15	76,955.93
1,134.69	1,120.91	1,179.56	2,528.67	15,278.46	11,044.78	134,515.61	150,636.27
				561.43	216.95	3,553.40	5,053.73
1,340.00	1,340.00	1,480.58	1,655.00	2,953.72	4,480.67	42,333.34	47,804.41
96.71						275.57	78.74
					46.21	405.49	371.06
6,183.78	6,664.78	5,580.79	8,360.31	32,523.38	30,509.83	333,726.34	385,670.43
4,333.05	3,576.19	4,598.73	5,409.52	19,544.70	15,150.76	232,260.62	223,062.35
				565.25		565.25	1,444.38
				839.50		4,982.18	
262.16	134.63	165.20	225.60	3,077.16	3,434.31	18,948.39	18,933.72
						1,297.50	434.23
						42.21	360.29
145.49	141.55	24.71	88.13	376.74	234.29	5,121.12	4,432.80
							91.33
						2,433.63	2,465.52
318.57	382.25	167.95	259.17	2,163.71	1,085.33	20,303.30	20,353.91
	40.50					1,201.58	655.90
1,070.55	997.96	2,082.43	1,794.31	2,106.97	4,203.52	28,666.51	32,067.53
495.91	523.18	1,066.39	1,066.39	2,127.38	2,688.33	21,945.07	25,055.33
6,625.73	5,796.26	8,105.41	8,843.12	30,801.41	26,796.54	337,767.36	329,357.29
	868.52			1,721.97	3,713.29		56,313.14
441.95		2,524.62	482.81			4,041.02	
576.00	335.00		398.00	2,660.00	1,612.00	22,577.67	16,214.56
	533.52				2,101.29		40,098.58
1,017.95		2,524.62	880.81	938.03		26,618.69	

STATEMENT
Comparative Detailed Operating Reports of Electrical Departments of

WASDELLS
SYSTEM

Municipality Population	Beaverton 986		Brehin Police Vil. xa		Cannington 951	
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
Domestic light.....	\$ 3,908.27 c.	\$ 4,262.25 c.	\$ 650.85 c.	\$ 862.55 c.	\$ 4,384.72 c.	\$ 4,563.79 c.
Commercial light.....	2,155.25	2,114.40	1,029.78	991.84	2,398.50	2,491.41
Commercial power.....	3,790.32	3,383.24	2,036.27	1,419.77	1,207.13	1,074.84
Municipal power.....						
Street light.....	1,079.50	1,231.98	189.00	198.00	1,224.00	1,388.00
Rural.....	1,402.32	1,849.55		150.00		232.06
Miscellaneous.....			150.00		130.53	
Total.....	12,335.66	12,841.42	4,055.90	3,622.16	9,344.88	9,750.10
EXPENSES						
Power purchased.....	5,630.75	5,237.08	3,268.69	2,624.87	4,112.90	3,931.85
Substation operation.....						
Substation maintenance.....						
Distribution system, operation and maintenance.....	899.85	1,231.31	335.30	353.29	795.57	930.75
Line transformer maintenance.....		61.45				
Meter maintenance.....						
Consumers' premises expenses.....						
Street light, operation and maintenance.....	43.45	71.37		19.69	20.64	137.02
Promotion of business.....						
Billing and collecting.....						
Gen. office—salaries and exp..	123.52	163.23	18.89	47.39	215.97	195.82
Undistributed expenses.....	234.52					74.29
Interest.....	1,206.78	1,162.20	351.76	379.74	928.63	867.63
Sinking fund and principal payments on debentures..	403.27	322.38	44.69	35.17	332.63	314.87
Total expenses.....	8,542.14	8,249.02	4,019.33	3,460.15	6,406.34	6,452.23
Gross surplus.....	3,793.52	4,592.40	36.57	162.01	2,938.54	3,297.87
Gross loss.....						
Depreciation charge.....	621.00	388.00	134.00	82.00	578.00	369.00
Net surplus.....	3,172.52	4,204.40		80.01	2,360.54	2,928.87
Net loss.....			97.43			

xa Operated by Municipal Council.
xb Two months' operation.

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Kirkfield P.V. xa		Pt. Perry xb 1,162	Sunderland P.V. xa		Uxbridge xb 1,492	Woodville xa 455		WASDELLS SYSTEM SUMMARY	
1921	1922	1922	1921	1922	1922	1921	1922	1921	1922
\$ c. 318.70	\$ c. 495.95	\$ c. 860.24	\$ c. 1,851.55	\$ c. 1,858.95	\$ c. 589.77	\$ c. 2,195.02	\$ c. 2,079.40	\$ c. 13,309.11	\$ c. 15,572.90
705.46	891.31	509.11	1,398.06	1,523.73	669.36	1,330.04	1,341.09	9,017.09	10,532.25
	560.90	.....	814.60	755.72	19.94	1,846.69	1,470.02	9,695.01	8,684.43
633.65	546.00	386.83	549.00	621.00	400.00	684.00	900.00	4,359.15	5,671.81
		.....	1,652.46	1,721.24	.....	462.73	1,210.57	3,517.51	5,163.42
		.....			.....			280.53	.....
1,657.81	2,494.16	1,756.18	6,265.67	6,480.64	1,679.07	6,518.48	7,001.08	40,178.40	45,624.81
1,010.96	1,354.09	1,253.40	3,607.33	3,022.36	1,280.11	3,955.25	3,595.35	21,585.88	22,299.11
					
171.43	213.55	130.00	525.57	377.75	.....	583.40	428.79	3,311.12	3,665.44
		.....			.....				61.45
					
59.60	39.39	113.43	78.75	33.96	8.08	63.18	36.74	265.62	459.68
					
17.07	9.93	.....	97.50	53.00	187.69	21.44	18.15	494.39	675.2
		.....		31.35	.....			234.52	105.64
371.48	408.25	342.93	1,074.05	1,000.72	161.33	620.32	588.73	4,553.02	4,911.53
173.10	172.89	.....	164.77	175.08	.....	171.05	129.00	1,289.51	1,149.39
1,803.64	2,198.10	1,839.76	5,547.97	4,694.22	1,637.21	5,414.64	4,796.76	31,734.06	33,327.45
	296.06	.....	717.70	1,786.42	41.86	1,103.84	2,204.32	8,444.34	12,297.36
145.83	.....	83.58	.....		.....	
249.00	125.00	.....	260.00	164.00	.....	192.00	120.00	2,034.00	1,248.00
	171.06	.....	457.70	1,622.42	41.86	911.84	2,084.32	6,410.34	11,049.36
394.83	.....	83.58	.....		.....	

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

MUSKOKA
SYSTEM

Municipality	Gravenhurst xb 1,621		Huntsville xb 2,316		MUSKOKA SYSTEM SUMMARY	
Population						
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	4,219.34	5,284.76	8,380.90	8,645.00	12,600.24	13,929.76
Commercial light.....	6,239.31	3,445.13	4,325.78	4,920.30	10,565.09	8,365.43
Commercial power.....	5,024.86	7,742.95	13,413.11	13,275.74	18,437.97	21,018.69
Municipal power.....	504.00	504.00	1,032.63	1,083.33	1,536.63	1,587.33
Street light.....	1,804.23	1,885.77	1,887.00	1,938.00	3,691.23	3,823.77
Rural.....						
Miscellaneous.....		430.84	514.19	113.91	514.19	544.75
Total.....	17,791.74	19,293.45	29,553.61	29,976.28	47,345.35	49,269.73
EXPENSES						
Power purchased.....	6,807.01	6,951.91	20,362.63	23,313.48	27,169.64	30,265.39
Substation operation.....						
Substation maintenance.....						
Distribution system, operation and maintenance.....	2,679.08	1,929.59	746.60	1,608.09	3,425.68	3,537.68
Line transformer maintenance.....						
Meter maintenance.....						
Consumers' premises expenses.....						
Street light, operation and maintenance.....	386.10	351.79	152.52	141.03	538.62	492.82
Promotion of business.....						
Billing and collecting.....						
Gen. office—salaries and exp.. Undistributed expenses.....	1,704.40	1,768.88	2,282.51	2,626.82	3,986.91	4,395.70
Interest.....	1,835.89	1,729.24	1,336.48	921.14	3,172.37	2,650.38
Sinking fund and principal payments on debentures..	1,982.67	2,244.31	965.33	1,020.50	2,948.00	3,264.81
Total expenses.....	15,395.15	14,975.72	25,846.07	29,631.06	41,241.22	44,606.78
Gross surplus.....	2,396.59	4,317.73	3,707.54	345.22	6,104.13	4,662.95
Gross loss.....						
Depreciation charge.....	2,135.00	1,443.00	966.00	592.00	3,101.00	2,035.00
Net surplus.....	261.59	2,874.73	2,741.54		3,003.13	2,627.95
Net loss.....				246.78		

xa Operated by Municipal Council.

xb Hydro and Water Departments under one Commission.

xd Hydro, Gas and Water Departments under one Commission.

“ C ”—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

ST. LAWRENCE
SYSTEM

xb Alexandria 2,319		xa Apple Hill Police Vil. xa		xd Brockville 9,377		xa Chesterville 941	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c. 3,053.03	\$ c. 4,527.07	\$ c. 264.14	\$ c. 522.93	\$ c. 27,780.61	\$ c. 31,330.52	\$ c. 3,559.07	\$ c. 3,955.40
3,227.37	4,350.98	236.51	527.94	24,960.63	25,198.96	2,923.10	2,862.69
3,657.79	5,880.88	221.14	595.57	37,701.25	38,895.75	6,133.40	5,460.28
884.54	1,647.55			6,163.15	10,495.92		
3,116.56	3,510.00	271.75	483.00	9,000.00	9,000.00	1,235.00	1,235.00
							719.60
13,939.29	19,916.48	993.54	2,129.44	105,605.64	114,921.15	13,850.57	14,232.97
10,316.44	13,621.04	825.96	1,626.59	55,951.02	50,416.25	11,671.99	8,835.51
				9,500.28	9,656.89		
				2,136.03	1,229.00		
1,793.51	1,575.82	44.89	6.712	4,479.13	5,778.60	1,165.07	944.39
				257.69	59.78		
				1,189.94	1,132.96		
256.47	227.96	38.80	38.02	2,490.60	2,375.50	56.99	36.58
				1,696.63	1,301.69		
				955.13	870.69		
1,191.89	681.84	107.00	182.31	3,666.53	4,095.15	128.09	153.60
				2,276.28	1,978.18	180.41	
1,215.42	2,936.17	29.40	342.80	9,661.98	9,257.81	705.03	657.35
1,289.42	1,531.37		135.92	8,985.82	9,186.03	235.96	249.61
16,063.15	20,574.20	1,046.05	2,392.76	103,247.06	97,338.53	14,143.54	10,877.04
				2,358.58	17,582.62		3,355.93
2,123.86	657.72	52.51	263.32			292.97	
	633.00		95.00	4,867.00	2,889.00	534.00	344.00
					14,693.62		3,011.93
2,123.86	1,290.72	52.51	358.32	2,508.42		826.97	

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

**ST. LAWRENCE
SYSTEM—Concluded**

Municipality	Lancaster xa 612		Martintown Police Vil. xa		Maxville xa 785	
Population						
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
Domestic light.....	\$ 405.83	\$ 1,230.64	\$ 258.15	\$ 514.19	\$ 1,163.74	\$ 2,003.68
Commercial light.....	399.35	971.84	190.42	452.72	974.77	2,079.24
Commercial power.....					305.47	507.53
Municipal power.....						
Street light.....	621.37	1,160.00	210.00	450.00	821.33	1,484.00
Rural.....		108.01	54.25	113.56		
Miscellaneous.....						
Total.....	1,426.55	3,470.49	712.82	1,530.47	3,265.31	6,074.45
EXPENSES						
Power purchased.....	2,232.53	3,894.30	531.71	836.55	3,735.26	4,116.69
Substation operation.....						
Substation maintenance.....						
Distribution system, operation and maintenance.....	3.16	183.88	.20	54.76	213.46	619.33
Line transformer maintenance.....						
Meter maintenance.....						
Consumers' premises expenses.....						
Street light, operation and maintenance.....	64.80	17.10	8.10		151.39	33.94
Promotion of business.....						
Billing and collecting.....						
Gen. office—salaries and exp..	33.78	165.20	25.51	33.32	76.91	134.75
Undistributed expenses.....						
Interest.....	441.81	623.01	150.66	326.07	548.38	981.51
Sinking fund and principal payments on debentures..	176.70	374.60	81.55	172.89	458.87	484.11
Total expenses.....	2,952.78	5,258.09	797.73	1,423.59	5,184.27	6,370.33
Gross surplus.....				106.88		
Gross loss.....	1,526.23	1,787.60	84.91		1,918.96	295.88
Depreciation charge.....		171.00		78.00		302.00
Net surplus.....				28.88		
Net loss.....	1,526.23	1,958.60	84.91		1,918.96	597.88

xa Operated by Municipal Council.

xb Hydro and Water Departments under one Commission.

“ C ”—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Prescott xb 2,723		Williamsburg P.V. xa		Winchester xa 1,058		ST. LAWRENCE SYSTEM SUMMARY	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c. 7,851.66 4,730.49 4,087.29 1,634.65 4,693.50 78.15	\$ c. 8,954.07 5,196.38 4,536.32 1,944.97 4,693.50 797.26	\$ c. 926.67 439.04 230.38 221.00 82.94	\$ c. 1,391.67 241.37 257.92 348.50	\$ c. 4,987.06 2,925.86 595.07 1,930.50 777.17	\$ c. 5,754.06 2,731.95 698.10 1,930.50 92.50	\$ c. 50,249.96 41,007.54 52,931.79 8,682.34 22,121.01 54.25 938.26	\$ c. 60,184.23 44,614.07 56,832.35 14,088.44 24,294.50 221.57 1,609.36
23,075.74	26,122.50	1,900.03	2,239.46	11,215.66	11,207.11	175,985.15	201,844.52
10,946.18 615.59 144.16 1,442.16 609.59 82.23 2,220.65 423.50 1,057.10 1,143.81	10,006.86 1,225.17 249.46 1,531.71 172.15 656.27 18.54 2,263.71 352.67 806.18 1,177.21	1,333.75 265.74 20.59 18.17 109.20 111.47	1,259.64 175.50 64.08 13.03 101.89 117.04	6,057.65 936.35 127.78 643.30 717.31 190.28	5,013.08 870.41 113.14 630.62 527.00 201.70	103,602.49 10,115.87 2,280.19 10,343.67 257.69 1,189.94 3,825.11 1,696.63 1,037.36 8,111.83 2,880.19 14,636.29 12,673.88	99,626.51 10,882.06 1,478.46 11,801.52 59.78 1,305.11 3,562.59 1,301.69 889.23 8,353.53 2,330.85 16,559.79 13,630.48
18,684.97 4,390.77 2,422.00 1,968.77	18,459.93 7,662.57 1,589.00 6,073.57	1,858.92 41.11 124.00 82.89	1,731.18 508.28 78.00 430.28	8,672.67 2,542.99 579.00 1,963.99	7,355.95 3,851.16 144.00 3,707.16	172,651.14 3,334.01 8,526.00 5,191.99	171,781.60 30,062.92 6,323.00 23,739.92

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

RIDEAU
SYSTEM

Municipality Population	Carleton Place xb 4,123		Kempt- ville 1,220	Lanark 575		Perth xb 3,710	
Year	1921	1922	1922	1921	1922	1921	1922
EARNINGS							
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	11,854.98	12,654.99	5,087.81	362.16	1,735.71	12,485.61	13,682.49
Commercial light.....	7,974.78	7,206.47	5,787.86	230.36	1,547.66	8,879.44	9,091.75
Commercial power.....	18,877.89	21,600.94	1,764.22		109.71	15,297.72	14,236.20
Municipal power.....	1,653.39	2,210.58				2,723.70	2,519.10
Street light.....	1,810.22	1,838.00	2,016.00	163.32	976.67	1,369.93	1,715.53
Rural.....							
Miscellaneous.....	402.97	628.82				1,287.22	1,698.89
Total.....	42,574.23	46,139.80	14,655.89	755.84	4,369.75	42,043.62	42,943.96
EXPENSES							
Power purchased.....	31,698.59	29,346.36	5,728.27	556.24	2,059.44	22,699.64	19,428.17
Substation operation.....	167.27						360.87
Substation maintenance.....		140.61				395.33	4.55
Distribution system, operation and maintenance.....	1,943.15	2,660.95	707.75	26.70	167.19	462.45	870.64
Line transformer maintenance.....	179.55	161.49				14.90	189.39
Meter maintenance.....	471.94	350.93				466.43	241.62
Consumers' premises expenses.....							
Street light, operation and maintenance.....	907.69	623.59	167.76	10.90	6.75	138.70	316.56
Promotion of business.....							
Billing and collecting.....	637.92	602.61				852.92	1,243.66
Gen. office—salaries and exp.....	2,624.34	2,071.40	346.26	5.38	94.69	2,402.21	2,210.35
Undistributed expenses.....		1,653.66				444.89	513.73
Interest.....	3,631.71	2,338.82	1,482.28	65.47	476.96	5,480.79	5,391.99
Sinking fund and principal payments on debentures.....	568.49	602.60	335.19		244.66	738.19	1,533.74
Total expenses.....	42,830.65	40,553.02	8,767.51	664.69	3,049.69	34,096.45	32,305.27
Gross surplus.....		5,586.78	5,888.38	91.15	1,320.06	7,947.17	10,638.69
Gross loss.....	256.42						
Depreciation charge.....	2,231.00	1,318.00	444.00		135.00	2,725.00	1,716.00
Net surplus.....		4,268.78	5,444.38	91.15	1,185.06	5,222.17	8,922.69
Net loss.....	2,487.42						

xb Hydro and Water Departments under one Commission.

xf Hydro, Water, Telephone and Railway under one Commission.

“ C ”—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

				THUNDER BAY SYSTEM		OTTAWA SYSTEM	
Smiths Falls 6,529		RIDEAU SYSTEM SUMMARY		Port Arthur xf 15,629		Ottawa 112,899	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
24,285.20	24,402.79	48,987.95	57,563.79	49,880.56	52,356.36	131,863.72	154,936.08
12,264.33	14,260.12	29,348.91	37,893.86	31,067.82	34,267.89	67,251.51	80,732.27
22,766.84	21,839.34	56,942.45	59,550.41	185,395.43	216,952.52	34,202.59	37,483.22
2,537.20	3,235.15	6,914.29	7,964.83	34,500.97	34,608.54	29,131.15	29,256.49
4,250.00	4,250.04	7,593.47	10,796.24	16,963.00	16,830.54	61,894.15	67,226.10
917.81	301.06	2,608.00	2,628.77	1,221.85	2,611.55	3,765.85	3,981.52
67,021.38	68,288.50	152,395.07	176,397.90	319,029.63	357,627.40	328,108.97	373,615.68
33,638.60	28,633.16	88,593.07	85,195.40	180,592.95	241,689.82	107,133.65	122,937.00
1,848.38	1,570.08	2,015.65	1,930.95	8,750.22	8,395.05	9,824.52	7,560.22
226.74	75.78	622.07	220.94	3,281.46	49.31		
1,903.71	2,897.80	4,336.01	7,304.33	22,514.61	22,457.40	17,095.18	18,922.70
	11.36	194.45	362.24	410.86	482.01	1,516.78	312.38
835.84	256.37	1,774.21	848.92	3,949.59	1,017.18	3,440.89	7,121.11
				9.21			
699.23	339.47	1,756.52	1,454.13	4,310.46	4,168.86	26,199.07	26,656.28
				1,558.68	730.28	7,922.13	7,726.14
1,896.04	1,449.64	3,386.88	3,295.91	3,894.94	3,422.50	23,861.26	24,520.50
5,096.46	3,056.39	10,128.39	7,779.09	8,820.58	10,003.45	15,002.41	14,186.07
1,659.09	4,243.68	2,103.98	6,411.07	8,349.11	7,075.36	9,196.40	8,348.13
11,068.16	10,156.87	20,246.13	19,846.92	22,752.60	21,983.07	30,503.28	34,981.00
5,790.35	6,139.74	7,097.03	8,855.93	16,914.05	16,601.26	14,621.44	14,621.44
64,662.60	58,830.34	142,254.39	143,505.83	286,109.32	338,075.55	266,317.01	287,892.97
2,358.78	9,458.16	10,140.68	32,892.07	32,920.31	19,551.85	61,791.96	85,722.71
6,639.25	3,687.00	11,595.25	7,300.00	11,492.90	11,492.00	46,737.00	36,743.00
	5,771.16		25,592.07	21,428.31	8,059.85	15,054.96	48,979.71
4,280.47		1,454.57					

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

TRENT
SYSTEM

Municipality	Bloomfield		Havelock		Kingston ^{xc}	
Population	512		1,258		22,234	
Year	1921	1922	1921	1922	1921	1922
EARNINGS						
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	1,481.86	1,585.28	2,878.51	4,476.92	45,106.18	57,519.97
Commercial light.....	665.41	736.46	948.64	1,429.97	49,129.35	58,501.36
Commercial power.....	635.33	789.12		136.43	39,525.13	48,263.76
Municipal power.....					6,310.65	7,165.09
Street light.....	975.00	1,066.50	2,128.00	2,291.25	20,000.00	20,367.05
Rural.....						
Miscellaneous.....					449.22	43.45
Total.....	3,757.60	4,177.36	5,955.15	8,334.57	160,520.53	191,860.68
EXPENSES						
Power purchased.....	2,341.71	2,186.33	2,918.77	2,996.55	55,636.24	60,727.52
Substation operation.....					12,262.24	8,937.00
Substation maintenance.....					4,510.85	6,147.17
Distribution system, operation and maintenance.....	66.47	49.26	676.31	789.60	4,744.99	11,993.50
Line transformer maintenance.....					1,395.41	3,156.43
Meter maintenance.....					2,926.36	3,122.83
Consumers' premises expenses.....						
Street light, operation and maintenance.....	77.85	110.35	156.32	241.10	10,901.61	9,832.74
Promotion of business.....						
Billing and collecting.....					3,778.83	3,180.31
Gen. office—salaries and exp..	215.15	216.29	70.18	247.24	7,639.47	7,156.12
Undistributed expenses.....					6,954.07	8,035.87
Interest.....	717.40	690.26	1,035.46	1,919.85	13,419.29	13,395.89
Sinking fund and principal payments on debentures..	200.69	212.73	785.63	832.77	8,828.78	9,003.13
Total expenses.....	3,619.27	3,465.22	5,642.67	7,027.11	132,998.14	144,688.51
Gross surplus.....	138.33	712.14	312.48	1,307.46	27,522.39	47,172.17
Gross loss.....						
Depreciation charge.....	386.00	225.00		528.00	12,603.00	7,935.00
Net surplus.....		487.14	312.48	779.46	14,919.39	39,237.17
Net loss.....	247.67					

xa Operated by Municipal Council.
xc Hydro and Gas under one Commission.

“ C ”—Continued

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

Lakefield 1,193		Marmora 792		Norwood 748		Omemee xa 485	
1921	1922	1921	1922	1921	1922	1921	1922
\$ c. 2,003.69 2,342.58 3,134.24	\$ c. 2,765.70 2,694.98 1,992.23	\$ c. 1,568.49 1,230.50 61.56	\$ c. 2,150.59 1,609.85 159.42	\$ c. 1,509.20 1,001.85 27.18	\$ c. 2,413.40 1,627.72 744.35	\$ c. 1,213.80 781.01 2,081.00	\$ c. 1,543.01 846.54 4,269.89
1,836.00	2,188.00	2,187.00	2,187.00	2,102.80	2,248.95	847.18	911.01
9,316.51	9,640.91	5,047.55	6,106.86	4,641.03	7,034.42	4,922.99	7,570.45
4,984.23	3,536.17	1,227.59	1,435.73	1,104.30	2,065.71	2,044.94	3,451.83
1,285.14	954.23	93.91	177.71	778.79	790.78	209.93	495.71
31.63	115.43	38.90	40.61	81.83	115.08	13.99	104.47
185.52	197.56	362.85	414.98	136.84	199.90	174.20	144.65
1,942.78	1,993.00	1,181.17	1,074.62	579.24	2,118.40	791.63	681.30
387.84	413.05	573.91	608.58	157.01	443.80	377.86	400.53
8,817.14	7,209.44	3,478.33	3,752.23	2,838.01	5,733.67	3,612.55	5,278.49
499.37	2,431.47	1,569.22	2,354.63	1,803.02	1,300.75	1,310.44	2,291.96
901.00	520.00		315.00		634.00	529.00	330.00
	1,911.47	1,569.22	2,039.63	1,803.02	666.75	781.44	1,961.96
401.63							

STATEMENT

Comparative Detailed Operating Reports of Electrical Departments of

TRENT
SYSTEM—Concluded

Municipality Population	Peterborough xb 21,439		Picton xb 3,263	
	1921	1922	1921	1922
EARNINGS				
	\$ c.	\$ c.	\$ c.	\$ c.
Domestic light.....	59,506.10	68,182.00	11,840.43	11,294.43
Commercial light.....	35,364.67	38,343.99	9,641.61	8,540.27
Commercial power.....	76,195.98	63,833.18	8,042.96	6,376.19
Municipal power.....			4,120.01	3,957.45
Street light.....	15,132.95	15,825.69	3,971.68	4,420.61
Rural.....				
Miscellaneous.....	257.65		62.21	3,550.60
Total.....	186,457.35	186,184.86	37,678.90	38,139.55
EXPENSES				
Power purchased.....	106,360.28	98,427.15	14,126.15	12,486.60
Substation operation.....	2,456.68	2,462.03		
Substation maintenance.....	168.16	241.47		
Distribution system, operation and maintenance.....	15,904.48	12,575.06	1,758.10	196.45
Line transformer maintenance.....	1,316.86	1,398.12		
Meter maintenance.....	4,650.01	3,802.06		
Consumers' premises expenses.....				
Street light, operation and maintenance.....	3,871.36	3,904.92	165.73	1,331.62
Promotion of business.....		698.32		
Billing and collecting.....	6,234.08	4,928.07		
Gen. office—salaries and exp..	9,997.35	8,657.84	4,584.39	5,268.20
Undistributed expenses.....	5,202.01	6,146.16		
Interest.....	12,362.69	13,486.82	149.85	
Sinking fund and principal payments on debentures..	3,922.63	5,601.72	301.43	319.52
Total expenses.....	172,446.59	162,329.74	21,085.65	19,602.39
Gross surplus.....	14,010.76	23,855.12	16,593.25	18,537.16
Gross loss.....				
Depreciation charge.....	10,419.00	7,232.00	955.00	730.00
Net surplus.....	3,591.76	16,623.12	15,638.25	17,807.16
Net loss.....				

xa Operated by Municipal Council.

xb Hydro and Water Departments under one Commission.

“ C ”—Concluded

Hydro Municipalities for the Years Ended December 31, 1921 and 1922

				ALL SYSTEMS	
Wellington xa 840		TRENT SYSTEM SUMMARY		GRAND TOTALS	
1921	1922	1921	1922	1921	1922
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
2,611.66	3,092.49	129,719.92	155,023.79	3,149,080.03	3,786,608.23
1,199.05	1,340.74	102,304.67	115,671.88	1,851,501.76	2,158,306.34
1,736.95	1,842.93	131,440.33	128,407.50	3,895,437.46	4,383,912.97
.....	.....	10,430.66	11,122.54	654,531.01	973,263.38
882.00	882.00	50,062.61	52,388.06	1,060,357.77	1,160,446.81
.....	.....	.....	.....	145,566.57	105,877.09
.....	.....	769.08	3,594.05	225,467.70	187,689.39
6,429.66	7,158.16	424,727.27	466,207.82	10,981,942.30	12,756,104.21
3,389.36	3,019.84	194,133.57	190,333.43	4,876,650.31	6,636,853.37
.....	.....	14,718.92	11,399.03	314,838.35	315,443.70
.....	.....	4,679.01	6,388.64	104,798.01	100,763.67
466.78	459.39	25,984.90	28,481.69	479,405.38	519,252.16
.....	.....	2,712.27	4,554.55	65,088.46	52,932.26
.....	.....	7,576.37	6,924.89	116,722.97	107,806.88
.....	.....	.....	.....	134,854.92	143,388.88
213.63	11.84	15,552.85	15,808.16	297,481.52	297,363.86
.....	.....	.....	698.32	101,804.46	129,932.63
.....	.....	10,012.91	8,108.38	321,685.71	338,153.50
520.00	213.82	23,885.97	22,716.60	656,268.11	605,852.50
.....	.....	12,156.08	14,182.03	317,387.37	385,895.03
990.15	1,323.27	33,169.66	36,683.41	998,611.47	1,074,657.44
131.32	220.15	15,667.10	18,055.98	532,183.96	635,469.90
5,711.26	5,248.31	360,249.61	364,335.11	9,317,781.00	11,343,765.78
718.40	1,909.85	64,477.66	101,872.71	1,664,161.30	1,412,338.43
.....
615.00	374.00	26,408.00	18,823.00	1,044,434.85	715,814.24
103.40	1,535.85	38,069.66	83,049.71	619,726.45	696,524.19
.....

STATEMENT "D"

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Year	Domestic light						Commercial light						Power							
		Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption \$ c.	Average monthly bill kw-hr	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Number of consumers	Average horsepower per horsepower	Average cost per horsepower	Total number of consumers	
Acton—	1913	1,236.50	82	6.9	1,567.48	62	10	318.77	3	147
	1914	1,463.72	21,192	146	15	.....	6.6	.....	1,496.18	19,878	58	28	2.08	7.5	.....	836.13	5	.....	.....	209
	1915	1,931.11	29,079	183	15	.....	6.5	.....	1,725.73	24,336	53	36	2.59	7.1	.....	1,019.27	5	.....	.....	241
	1916	1,942.11	29,685	185	15	.....	6.5	.....	1,592.62	35,227	60	52	2.35	4.5	.....	1,565.53	7	.....	.....	252
	1917	2,016.13	34,268	200	15	84	5.9	.....	1,600.56	38,244	65	49	2.05	4.2	.....	4,116.69	9	.....	.....	274
	1918	2,154.00	41,593	219	16	85	5.2	.....	1,360.35	32,897	61	43	1.80	4.1	.....	5,166.36	9	157	26.22	274
	1919	2,628.12	44,352	235	16	93	5.9	.....	1,613.56	39,807	65	51	2.07	4.1	.....	5,329.46	10	170	30.39	289
	1920	3,115.26	76,922	260	25	1.00	4.0	.....	1,672.82	40,272	71	47	1.96	4.2	.....	5,230.46	10	199	26.78	310
	1921	3,650.48	100,205	301	28	1.01	3.6	.....	2,012.27	56,732	69	68	2.34	3.5	.....	5,558.31	14	200	26.15	341
	1922	4,374.68	131,954	351	31	1.03	3.3	.....	2,364.01	70,027	64	91	3.08	3.4	.....	6,901.68	16	267	25.85	431
Ailsa Craig—	1916	579.57	6,270	51	.....	.....	9.2	None	213.46	1,910	11	.....	.....	11.2	None	15.57	1	.....	.....	63
	1917	776.93	7,584	55	12	1.22	10.2	.....	255.84	932	19	.....	.....	11.2	.....	1,591.95	4	40	39.80	78
	1918	820.95	9,176	58	13	1.22	8.9	.....	299.58	3,432	24	13	1.19	8.7	.....	4,003.23	3	87	46.01	85
	1919	1,087.47	12,991	71	15	1.28	8.4	.....	496.94	3,578	27	11	1.53	13.1	.....	3,786.31	1	93	31.03	99
	1920	1,292.33	14,654	78	16	1.38	8.8	.....	630.19	6,627	30	18	1.75	9.5	.....	5,400.16	3	141	38.30	111
	1921	1,402.73	20,369	95	18	1.23	6.9	.....	722.21	7,553	32	20	1.88	9.6	.....	5,297.07	3	124	42.71	130
	1922	1,557.35	25,145	99	21	1.31	6.2	.....	729.78	8,509	32	22	1.90	8.6	.....	5,532.03	3	128	43.22	134
	Alexandria—	1922	4,527.07	108,417	221	41	1.71	4.2	4,350.98	50,916	88	48	412	8.5	7,528.43	11	143	52.64	320

STATEMENT 'D'—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Year	Domestic light							Commercial light							Power				Total number of consumers
		Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Number of consumers	Average horsepower per horsepower	Average cost \$ c.	
Baden—	1913	884.11	.....	75	75	.....	.....	.....	.....	.....	*	7	75	10.0	None	2,242.77	4	.....	.....	79
	1914	1,247.81	6,920	82	82	75	10.0	.....	*	5,547	*	13	98	7.4	.....	4,580.23	4	.....	.....	86
	1915	938.33	12,729	72	72	98	7.4	.....	*	.....	*	16	86	5.5	.....	4,588.87	4	.....	.....	76
	1916	808.21	8,824	84	84	86	5.5	.....	*	5,772	*	12	86	5.5	.....	5,059.33	5	.....	.....	89
	1917	842.09	10,066	58	58	12	98	8.4	.....	5,827	23	21	98	8.4	.....	5,243.91	5	175	29.96	86
	1918	975.04	16,543	60	60	23	98	4.3	.....	5,865	23	21	98	4.3	.....	5,202.04	4	185	28.11	87
	1919	1,097.74	15,917	68	20	97	4.7	.....	.....	10,089	28	25	97	4.7	.....	5,669.93	5	211	26.87	99
	1920	1,338.03	18,212	73	27	102	3.8	.....	456.15	10,390	24	36	1.60	4.4	.....	5,747.18	6	223	25.89	107
	1921	958.06	25,280	78	38	1.11	2.9	.....	440.60	13,894	24	48	1.53	3.2	.....	5,067.22	6	230	25.94	108
	1922	1,150.47	38,721	86	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6,397.12	4	252	25.39	114
Barrie—	1913	10,071.55	.....	563	.....	.....	.....	9	9,252.70	.....	200	.....	3.85	.....	.....	3,390.29	13	.....	.....	776
	1914	11,149.49	152,095	651	20	1.54	7.3	.....	9,464.64	138,948	200	58	3.93	6.8	.....	3,712.24	13	.....	.....	864
	1915	11,087.68	147,307	843	18	1.24	7.1	.....	9,572.91	177,000	252	65	3.50	5.4	.....	4,567.76	14	.....	.....	1,109
	1916	11,907.10	204,420	896	20	1.14	5.8	.....	10,635.67	189,409	257	63	3.50	5.6	.....	6,918.33	18	.....	.....	1,171
	1917	11,232.68	242,297	942	22	1.02	4.6	.....	8,750.24	185,095	253	61	2.86	4.8	.....	7,978.72	19	310	25.74	1,214
	1918	12,456.76	278,882	956	24	1.08	4.4	.....	7,365.45	178,954	258	58	2.40	4.1	.....	9,296.34	20	340	27.34	1,234
	1919	12,395.37	345,723	1,079	23	96	4.2	.....	7,245.39	283,758	268	88	2.25	2.5	.....	12,077.45	22	432	27.96	1,369
	1920	14,459.88	534,517	1,279	35	94	2.7	.....	7,245.01	315,778	280	94	2.16	2.3	.....	11,398.66	23	439	25.96	1,582
	1921	16,926.24	732,748	1,349	45	1.05	2.3	.....	8,227.70	389,055	267	121	2.57	2.1	.....	10,595.15	27	485	27.85	1,643
	1922	19,647.34	732,748	1,517	40	108	2.7	.....	9,191.01	389,055	386	84	1.98	2.3	.....	10,471.50	29	376	27.85	1,932

Beachville—																			
1913	562.97	45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1914	587.33	45	4,422	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1915	363.33	37	5,356	11	74	6.8	296.37	2,988	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1916	400.81	42	5,891	13	84	6.8	263.62	4,847	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1917	419.11	44	6,317	12	79	6.6	286.14	5,597	12	34	2.05	7.9	.....	.....	.....	.....	.....	.....	.....
1918	441.44	47	6,448	12	79	6.6	267.81	6,117	12	27	1.83	6.8	.....	.....	.....	.....	.....	.....	.....
1919	467.51	53	8,721	14	74	5.4	421.38	8,366	13	42	1.86	4.3	.....	.....	.....	.....	.....	.....	.....
1920	788.33	69	12,838	15	95	6.1	375.22	9,006	19	54	2.70	5.0	.....	.....	.....	.....	.....	.....	.....
1921	786.32	71	11,404	13	92	6.9	433.10	9,219	23	39	1.65	4.2	.....	.....	.....	.....	.....	.....	.....
1922	869.75	74	16,773	19	96	5.1	630.79	17,305	25	58	2.10	3.6	.....	.....	.....	.....	.....	.....	.....
Beaverton—																			
1915	1,484.62	131	.....	.....	.....	.....	1,149.67	.....	56	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1916	1,417.39	131	20,085	13	90	6.9	1,065.23	17,594	60	25	1.53	6.1	.....	.....	.....	.....	.....	.....	.....
1917	1,482.00	148	20,945	13	89	7.1	1,041.84	18,162	51	28	1.58	5.7	.....	.....	.....	.....	.....	.....	.....
1918	2,109.23	127	27,754	17	1.28	7.6	1,167.92	22,897	52	37	1.87	5.1	.....	.....	.....	.....	.....	.....	.....
1919	2,818.75	142	39,920	23	1.65	7.1	1,318.27	36,495	53	57	2.07	3.6	.....	.....	.....	.....	.....	.....	.....
1920	3,472.74	151	59,573	33	1.91	5.8	1,723.15	37,272	52	60	2.76	4.6	.....	.....	.....	.....	.....	.....	.....
1921	3,908.27	159	53,580	28	2.05	7.3	2,155.25	38,316	55	58	3.27	5.6	.....	.....	.....	.....	.....	.....	.....
1922	4,262.25	165	76,443	39	2.15	5.5	2,114.40	47,621	60	66	2.94	4.5	.....	.....	.....	.....	.....	.....	.....
Beeton—																			
1918	268.41	62	.....	.....	.....	.....	144.29	.....	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1919	904.40	66	10,114	13	1.14	8.9	738.36	7,926	25	26	2.46	9.4	.....	.....	.....	.....	.....	.....	.....
1920	1,284.55	76	13,050	14	1.41	9.8	906.28	10,137	28	30	2.70	8.9	.....	.....	.....	.....	.....	.....	.....
1921	1,753.33	79	18,121	19	1.85	9.7	1,242.18	13,595	30	38	3.45	9.1	.....	.....	.....	.....	.....	.....	.....
1922	2,107.96	89	22,921	21	1.97	9.4	1,408.90	15,718	29	45	4.05	9.0	.....	.....	.....	.....	.....	.....	.....
Blenheim—																			
1917	2,256.70	212	30,314	12	89	7.4	2,113.67	28,786	84	29	2.09	7.3	.....	.....	.....	.....	.....	.....	.....
1918	2,281.49	216	29,136	11	88	7.8	1,843.63	21,546	76	22	1.92	8.5	.....	.....	.....	.....	.....	.....	.....
1919	2,998.75	259	45,345	15	97	6.6	2,541.02	46,942	85	46	2.49	5.4	.....	.....	.....	.....	.....	.....	.....
1920	3,519.19	308	70,262	19	95	5.0	2,956.41	60,862	91	56	2.71	4.8	.....	.....	.....	.....	.....	.....	.....
1921	4,396.96	359	69,897	16	1.02	6.3	3,638.77	69,641	93	62	3.25	5.2	.....	.....	.....	.....	.....	.....	.....
1922	4,861.99	406	86,881	18	1.00	5.6	3,799.58	73,293	98	62	3.23	5.2	.....	.....	.....	.....	.....	.....	.....
Bloomfield—																			
1920	1,184.19	76	12,063	13	1.30	9.8	607.68	6,283	15	35	3.38	9.7	.....	.....	.....	.....	.....	.....	.....
1921	1,481.86	78	16,381	17	1.58	9.1	665.41	6,114	16	32	3.48	10.9	.....	.....	.....	.....	.....	.....	.....
1922	1,585.28	88	18,410	17	1.50	8.8	736.46	7,390	19	32	3.23	10.0	.....	.....	.....	.....	.....	.....	.....

* Domestic and Commercial Light Revenue not divided.

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Domestic light					Commercial light					Power				
	Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per Kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.
Bolton															
1915	624.86	6,563	59	12	1.20	9.5	10+25	553.80	7,298	42	36	1.88	7.6	10	313.74
1916	926.86	9,322	70	13	1.27	9.3	10+25	882.26	13,081	36	26	1.46	6.7	10	3,947.32
1917	1,191.92	12,829	78	13	1.33	10.0	10+25	698.70	12,534	44	24	1.49	5.6	10	2,856.39
1918	1,262.21	12,072	80	12	1.33	10.0	10+25	791.76	12,997	44	24	1.49	6.1	10	3,882.39
1919	1,285.93	16,710	90	16	1.19	7.5	10+25	874.67	14,154	42	28	1.73	6.2	10	2,812.67
1920	1,450.23	19,690	97	17	1.24	7.4	10+25	1,380.69	18,262	43	31	2.34	7.6	10	4,060.05
1921	1,963.73	26,630	118	19	1.39	7.4	10+25	1,593.76	17,686	38	39	3.50	9.0	10	3,473.82
1922	2,154.22	27,989	119	20	1.51	7.6	10+25	1,310.13	13,980	40	29	2.73	9.4	10	4,185.85
Bothwell															
1915	230.61	8,662	68	10	1.03	10.7	Flat	191.21	8,613	32	17	1.46	8.9	Flat	100
1916	928.16	9,890	78	10	1.05	10.9	Flat	768.57	8,877	52	16	1.53	9.3	Flat	130
1917	1,085.92	11,101	86	10	1.05	9.9	Flat	825.43	8,254	45	14	1.28	8.9	Flat	133
1918	1,107.02	15,415	89	14	1.21	8.8	Flat	740.20	15,262	51	24	1.60	6.7	Flat	147
1919	1,359.99	16,911	94	14	1.27	10.0	Flat	1,015.60	14,787	53	23	2.05	9.1	Flat	157
1920	1,706.75	22,356	112	13	1.38	9.1	Flat	1,306.66	18,996	57	28	2.24	8.1	Flat	169
1921	2,040.83	30,281	123	15	1.38	9.1	Flat	1,532.34	21,322	57	28	2.24	8.1	Flat	187
1922	2,257.72	30,281	143	18	1.31	7.2	Flat	1,407.11	21,322	48	37	2.44	6.6	Flat	206
Bradford															
1919	759.12	105,352	60	10	1.62	16.0	None	869.68	17,940	40	32	2.39	7.5	None	109
1920	1,727.98	33,218	89	27	2.02	7.6	None	1,350.90	20,656	47	39	3.45	8.8	None	138
1921	2,522.99	40,024	104	26	1.96	7.5	None	1,822.52	21,801	44	39	3.27	8.4	None	150
1922	3,032.09	40,024	129	26	1.96	7.5	None	1,844.21	21,801	47	39	3.27	8.4	None	178

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality		Domestic light							Commercial light							Power				
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers
Breachin—																				
1915		\$ 148.83	.....	13	kw-hr 11	\$ c. 1.02	9.4	cents None	\$ 407.78	kw-hrs.	14	kw-hr 28	\$ c. 2.00	7.5	cents None	\$ 1,007.59	1	.....	.....	28
1916		172.42	1,836	16	11	1.02	9.4	.....	404.70	5,370	20	28	2.00	7.5	.....	1,153.32	1	.....	.....	37
1917		194.03	2,131	19	10	0.90	9.1	.....	528.24	7,364	20	31	2.20	7.1	.....	1,285.50	2	32	40	41
1918		277.18	2,631	22	10	1.12	10.5	.....	552.35	8,177	24	30	2.09	6.7	.....	1,555.32	2	35	44	48
1919		422.33	5,382	25	18	1.41	7.8	.....	559.35	9,036	25	30	1.86	6.2	.....	2,157.29	3	58	37	53
1920		596.76	7,484	24	26	2.07	8.0	.....	707.93	8,909	21	35	2.81	7.9	.....	1,646.15	2	60	27	47
1921		650.85	8,317	28	25	1.94	7.8	.....	1,029.78	8,094	22	31	3.90	12.7	.....	2,036.27	3	62	32	53
1922		862.55	10,488	32	27	2.25	8.3	.....	991.84	11,567	23	42	3.59	8.5	.....	1,419.77	2	35	40	57
Brockville—																				
1916		12,897.12	144,913	965	.....	.....	9.0	9	21,994.02	253,153	312	.....	.....	8.7	9	15,828.62	31	.....	.....	1,308
1917		14,507.95	152,066	1,018	13	1.22	9.5	.....	22,907.56	246,940	378	59	5.54	9.3	.....	30,744.84	49	631	48	1,445
1918		15,731.23	162,902	1,146	12	1.21	9.6	.....	23,465.06	250,375	353	57	5.35	9.3	.....	49,647.73	47	.....	.....	1,546
1919		18,510.68	234,923	1,339	15	1.15	7.9	.....	22,816.26	310,515	370	70	5.14	7.3	.....	37,013.69	56	902	41	1,765
1920		20,943.36	324,733	1,396	20	1.25	6.4	.....	20,382.61	368,790	344	89	4.94	5.6	.....	38,572.72	59	1,113	34	1,799
1921		27,780.61	382,226	1,542	21	1.50	7.3	.....	24,960.63	399,529	350	95	5.94	6.2	.....	43,864.40	65	1,210	36	2,123
1922		31,330.52	434,339	1,686	21	1.55	7.4	.....	25,198.96	405,571	374	90	5.61	6.2	.....	49,391.67	63	1,323	37	2,123
Burford—																				
1916		577.69	9,005	64	.....	.....	6.4	Flat	380.44	7,569	30	.....	.....	5.0	Flat	519.72	1	.....	.....	15
1917		834.73	11,519	79	13	.....	7.2	.....	837.51	13,262	34	34	2.18	6.3	.....	549.31	1	.....	25	914
1918		1,089.73	15,489	81	16	1.13	7.0	.....	922.16	13,700	27	38	2.56	6.7	.....	434.05	1	25	17	109
1919		1,330.31	18,769	100	17	1.10	7.0	.....	1,064.23	17,680	32	46	2.77	6.0	.....	543.25	1	25	21	133
1920		2,023.41	.....	115	.....	1.56	.....	.....	1,194.81	.....	34	.....	3.02	.....	.....	279.34	1	7	40	150
1921		2,817.52	31,375	127	21	1.84	8.9	.....	1,673.49	18,555	37	42	3.77	9.0	.....	132.50	2	43	12	166
1922		3,491.08	42,104	139	25	2.09	8.4	.....	1,966.34	26,266	42	52	3.90	7.5	.....	1,057.03	5	36	29	186

Burgessville—																			
1917	359.41	5,299	29	.....	.....	115.15	1,506	9	.....	.....	.....	.....	.....	.....	815.36	1	88	.....	39
1918	379.94	4,025	32	11	1.01	102.66	1,321	10	12	.....	7.7	.....	.....	.....	875.67	1	30	29.18	43
1919	423.05	5,623	37	13	95	127.43	1,375	10	11	1.06	9.3	.....	.....	.....	643.88	1	28	22.99	48
1920	593.18	8,102	45	15	1.10	147.91	1,955	10	16	1.23	7.6	.....	.....	.....	688.75	1	30	22.99	56
1921	756.62	8,281	44	16	1.43	288.50	2,615	12	18	2.00	11.0	.....	.....	.....	821.31	1	30	27.38	57
1922	757.10	10,556	49	18	1.29	257.31	3,131	12	22	1.79	8.1	.....	.....	.....	656.82	1	30	21.89	62
Caledonia—																			
1913	404.60	.....	17	.....	.....	*	.....	16	.....	.....	.....	.....	.....	.....	470.34	1	.....	.....	34
1914	880.54	.....	21	.....	.....	*	.....	32	.....	.....	.....	.....	.....	.....	188.54	1	.....	.....	54
1915	265.62	4,618	24	16	98	950.38	18,325	33	47	2.44	5.4	.....	.....	.....	138.42	1	.....	.....	58
1916	263.39	4,800	27	16	86	777.38	20,000	37	47	1.85	4.0	.....	.....	.....	519.82	3	.....	.....	67
1917	283.63	5,500	33	13	79	786.20	22,800	38	50	1.72	3.4	.....	.....	.....	777.85	4	48	16.21	.....
1918	354.98	7,256	40	16	82	807.14	19,464	42	42	1.68	4.1	.....	.....	.....	922.18	4	33	27.94	86
1919	453.53	9,106	44	17	86	907.76	24,929	45	46	1.68	3.7	.....	.....	.....	733.31	8	40	18.33	97
1920	691.96	19,407	60	28	93	1,155.64	44,932	49	76	1.97	2.6	.....	.....	.....	989.23	9	71	14.00	118
1921	994.76	20,634	76	23	1.09	1,584.02	61,357	55	93	2.40	2.6	.....	.....	.....	1,139.37	7	72	15.82	138
1922	1,202.16	33,960	91	31	1.10	1,731.70	61,842	60	86	2.41	2.8	.....	.....	.....	958.20	7	77	12.44	158
Cannington—																			
1915	1,599.40	.....	135	.....	.....	1,120.04	.....	65	.....	.....	.....	.....	.....	.....	464.26	6	.....	.....	206
1916	1,720.25	25,049	150	15	1.00	973.63	13,808	73	17	1.17	7.1	.....	.....	.....	462.47	7	45	11.02	230
1917	2,040.36	29,390	137	17	1.19	936.22	19,722	70	23	1.10	4.7	.....	.....	.....	495.80	7	48	15.14	214
1918	2,264.80	40,160	143	24	1.34	917.90	16,741	64	20	1.14	5.4	.....	.....	.....	726.87	9	64	12.28	216
1919	2,656.21	53,287	162	27	1.37	1,437.51	24,496	63	33	1.90	5.9	.....	.....	.....	786.09	9	64	12.28	234
1920	3,713.43	73,365	176	35	1.76	2,042.35	24,518	68	30	2.34	8.3	.....	.....	.....	1,132.55	10	70	16.18	254
1921	4,384.72	61,107	182	28	2.01	2,398.50	32,801	70	39	2.85	7.3	.....	.....	.....	1,207.13	11	69	17.49	263
1922	4,563.79	97,542	189	43	2.01	2,491.41	30,794	67	38	3.10	8.2	.....	.....	.....	1,074.84	10	71	15.14	266
Carleton Place—																			
1920	8,241.32	210,676	636	28	1.08	6,835.20	229,583	144	133	3.95	3.0	.....	.....	.....	17,787.06	18	64	27.49	798
1921	11,854.98	296,188	664	37	1.49	7,974.78	193,141	150	107	4.43	4.1	.....	.....	.....	20,531.28	13	70	28.96	827
1922	12,654.99	249,425	713	29	1.48	7,206.47	143,660	160	75	3.75	5.0	.....	.....	.....	23,811.52	14	800	29.76	887
Chesley—																			
1917	2,122.78	25,792	185	12	95	1,971.03	30,058	81	31	.....	.....	.....	.....	.....	1,725.38	10	64	26.96	276
1918	2,348.43	32,368	202	14	1.01	2,071.77	37,126	78	39	2.17	5.5	.....	.....	.....	2,846.85	13	104	27.37	293
1919	2,975.29	46,212	226	17	1.10	2,679.48	46,369	81	48	2.76	5.8	.....	.....	.....	4,942.70	15	163	27.47	322
1920	4,000.52	68,967	259	22	1.29	2,943.77	50,415	83	51	2.96	5.8	.....	.....	.....	7,364.09	15	207	35.58	357
1921	5,352.03	84,811	269	26	1.66	3,523.13	49,937	90	46	3.26	7.0	.....	.....	.....	7,717.82	14	215	35.89	373
1922	5,894.11	84,407	282	25	1.74	4,301.33	59,095	92	54	3.90	7.2	.....	.....	.....	8,823.91	16	243	36.31	390

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Domestic light						Commercial light						Power				Total number of consumers		
	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per Kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers		Average horsepower	Average cost per horsepower
Chatham—	1915	5,581.54	110,552	949	kw-hr	\$ c.	cents	8+25	2,806.81	81,805	180	kw-hr	\$ c.	cents	8+25	\$	c.	7	\$ c.
	1916	10,155.37	176,508	1,171	14	80	5.5	5.8	7,427.36	174,204	215	81	3.48	4.3	3.4	449.70	3,766.37	25	.....
	1917	13,245.86	257,773	1,261	18	91	5.1	5.1	10,633.12	249,739	271	86	3.65	4.3	4.3	16,573.93	46	654	25.34
	1918	14,124.28	371,827	1,309	24	91	3.8	3.8	12,102.91	381,388	265	118	3.76	3.1	3.1	35,750.36	35	1,269	28.17
	1919	16,019.69	474,303	1,432	28	93	3.4	3.4	12,994.41	434,425	280	129	3.87	3.0	3.0	38,069.64	38	1,371	27.77
	1920	43,039.25	1,175,474	3,360	29	1.07	3.7	3.7	27,592.06	801,594	572	115	4.02	3.4	3.4	62,829.08	87	2,316	33.78
	1921	48,442.47	1,524,750	3,442	37	1.17	3.2	3.2	31,165.17	945,133	636	122	4.08	3.3	3.3	72,338.56	130	2,957	24.46
1922	52,252.33	1,657,651	3,540	39	1.23	3.1	3.1	33,091.92	1,047,783	745	117	3.70	3.2	3.2	77,861.75	131	3,072	25.35	
Chatsworth—	1917	379.96	4,256	37	10	87	8.9	None	253.75	3,980	23	14	92	6.4	None	.....	.....	.....	60
	1918	445.83	5,409	41	11	95	8.2	.....	259.74	3,542	24	13	92	7.3	.....	726.12	1	30	24.20
	1919	601.96	.....	46	.....	1.09	.....	.....	288.85	5,594	20	23	1.20	5.2	.....	622.58	1	23	27.05
	1920	724.34	9,279	50	15	1.21	7.8	.....	579.22	7,959	28	24	1.72	7.3	.....	298.26	1	30	.....
	1921	985.81	10,999	52	18	1.58	9.0	.....	786.28	8,386	27	26	2.43	9.4	.....	619.31	1	30	20.64
	1922	1,180.48	12,419	52	20	1.89	9.4	.....	789.95	7,737	28	23	2.35	10.2	.....	573.88	1	30	19.13
	1922	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	81
Chesterville—	1914	530.13	7,672	68	.....	.....	6.9	None	791.67	10,176	35	.....	.....	7.7	None	.....	.....	.....	103
	1915	919.27	12,663	85	14	1.00	7.2	.....	1,187.54	12,104	49	21	2.06	9.8	.....	.....	.....	.....	134
	1916	1,490.99	15,779	89	17	1.43	9.4	.....	1,240.56	15,179	47	26	2.12	8.2	.....	177.55	1	.....	137
	1917	1,505.16	18,395	87	17	1.42	8.2	.....	1,226.80	15,360	45	28	2.18	7.9	.....	2,134.49	2	53	40.27
	1918	1,485.76	21,485	96	19	1.35	6.9	.....	2,025.36	32,975	48	59	3.63	6.1	.....	3,520.13	2	95	37.05
	1919	1,815.29	40,414	115	28	1.31	4.7	.....	2,501.13	46,706	39	98	5.34	5.4	.....	3,984.91	2	124	32.13
	1920	2,618.21	39,488	126	26	1.73	6.6	.....	3,085.60	47,642	47	84	5.47	6.5	.....	6,955.75	2	186	37.40
	1921	3,559.07	45,564	143	27	2.07	7.8	.....	2,923.10	.....	56	.....	4.35	.....	.....	6,133.40	3	183	.....
	1922	3,955.40	50,992	151	28	2.18	7.7	.....	2,862.69	36,123	52	55	4.41	7.9	.....	5,460.28	3	141	38.72
	1922	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	206

Chippawa—																			
1920	2,078.72	39,243	116	40	2.14	5.3	None	269.76	11,910	23	1.40	6.1	None	1,487.77	3	60	24.80	139	
1921	2,932.89	70,746	144	41	1.70	4.1		723.18	14,871	26	38	2.32	6.1					170	
1922	3,373.63	75,044	172	36	1.63	4.4		706.82		34	41	1.96	4.7					209	
Clinton—																			
1914	2,023.70	21,466	179	...	...	9.4	10+25	2,028.08	24,696	111	...	8.2	10+25					297
1915	2,930.57	36,598	204	16	1.28	8.2		3,068.63	40,234	110	20	2.31	7.6		7			320	
1916	3,161.29	41,986	211	17	1.27	7.5		3,064.37	41,205	122	31	2.30	7.4		6			330	
1917	3,220.73	40,965	246	15	1.19	7.9		2,654.30	34,471	115	25	1.92	7.7		7	74	31.73	368	
1918	3,536.08	60,774	258	20	1.16	5.8		2,311.42	40,289	121	28	1.63	5.7		10	114	32.06	389	
1919	4,447.04	78,737	276	24	1.34	5.6		3,044.93	54,665	124	37	2.05	5.5		11	142	32.32	411	
1920	5,013.77	105,302	332	26	1.26	4.8		3,586.69	65,248	140	39	2.13	5.5		11	144	32.31	483	
1921	6,045.27	120,135	361	28	1.40	5.0		4,064.94	71,139	130	46	2.61	5.7		11	142	27.87	502	
1922	6,478.04	132,243	388	28	1.39	4.8		4,125.00	82,609	131	53	2.64	4.9		11	143	29.77	530	
Coldwater—																			
1913	405.43	...	48	...	...	...	None	330.25	...	132	...	...	None	247.19	1	...	...	81
1914	853.56	12,466	62	19	1.30	6.8		589.85	10,382	39	24	1.40	5.7		2	...	...	103
1915	874.94	16,706	66	21	1.15	5.3		703.35	13,686	37	31	1.54	5.1		2	...	...	105
1916	977.62	16,599	70	20	1.20	5.9		848.82	16,644	39	36	1.85	5.1		2	...	...	111
1917	984.41	22,186	75	25	1.09	4.4		640.85	15,939	39	34	1.37	4.0		1	20	...	115	
1918	1,078.94	18,058	79	19	1.16	5.9		687.48	12,857	38	28	1.48	5.3		2	33	16.12	119	
1919	1,134.84	21,530	131	14	1.72	5.2		680.02	14,697	43	29	1.32	4.5		3	71	14.99	177	
1920	1,415.14	28,034	87	27	1.36	5.0		1,054.87	21,905	47	39	1.87	4.8		4	85	18.22	138	
1921	1,705.16	28,927	87	28	1.63	5.9		1,306.92	19,726	47	35	2.32	6.6		4	102	20.39	139	
1922	1,959.10	34,092	97	30	1.77	5.7		1,415.30	19,955	46	35	2.51	7.0		6	112	23.00	148	
Collingwood—																			
1913	7,013.66	83,406	477	...	...	8.4	11+10	9,362.17	108,676	220	...	8.4	11+10	896.72	18	...	...	715
1914	7,857.86	103,598	554	16	1.27	7.6		7,555.54	123,276	232	46	2.78	6.1		21	...	...	807
1915	7,094.27	118,336	622	17	1.00	6.0		5,688.26	116,583	233	42	2.04	4.9		26	...	...	881
1916	8,320.44	162,464	714	20	1.04	5.1		6,213.86	163,956	243	58	2.18	3.8		33	...	...	989
1917	8,734.98	243,070	835	26	.94	3.6		5,398.59	189,485	236	66	1.99	2.8		41	1,558	25.04	1,112	
1918	11,145.94	257,082	919	24	1.05	4.3		6,287.25	226,399	234	80	2.23	2.7		40	2,149	24.77	1,202	
1919	11,510.41	431,071	1,007	37	.95	2.7		6,080.21	272,538	235	97	2.17	2.2		50	1,498	21.39	1,292	
1920	13,999.34	523,185	1,077	40	1.08	2.7		7,121.77	305,199	242	105	2.45	2.3		52	26,092	24	1,371	
1921	16,194.56	626,471	1,138	43	1.19	2.7		8,511.75	310,447	246	105	2.88	2.7		53	18,710	63	1,437	
1922	18,019.16	655,716	1,183	47	1.30	2.7		9,843.69	392,532	248	132	3.32	2.5		60	28,899	24	1,491	

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers

Municipality	Year	Domestic light							Commercial light							Power				Total number of consumers	
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	kwhrs.	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower		Average cost per horsepower
Comber—																					
	1915	214.87	3,181	33	14	1.32	6.8	None	274.49	3,497	33	33	15	1.50	7.8	None	.....	.....	.....	66
	1916	538.57	5,894	37	14	1.32	9.1	None	678.58	6,729	37	37	15	1.50	10.1	None	.....	.....	.....	74
	1917	541.45	6,542	39	14	1.22	8.3	None	689.59	7,245	36	36	17	1.60	9.5	None	.....	.....	.....	75
	1918	585.12	6,613	41	14	1.22	8.6	None	625.91	6,108	35	35	14	1.47	10.2	None	.....	.....	.....	76
	1919	740.75	8,609	48	15	1.29	8.6	None	865.75	9,253	40	40	19	1.80	9.4	None	.....	.....	.....	88
	1920	958.81	12,974	62	20	1.45	7.4	None	1,106.74	11,542	40	40	24	2.30	9.5	None	4,824.67	2	78	61.85	
	1921	1,275.54	15,852	68	20	1.65	8.0	None	1,289.89	16,024	40	40	38	2.69	8.1	None	5,294.15	2	92	57.54	
	1922	1,472.95	17,892	74	20	1.73	8.2	None	1,549.37	19,656	42	42	40	3.15	7.8	None	4,555.20	2	77	59.16	
Cookstown—																					
	1918	259.56	.....	42	.....	.....	.....	None	82.15	.....	12	12	.....	.....	.....	None	754.50	1	.....	.....
	1919	806.46	12,488	61	17	1.10	6.5	None	263.18	4,069	19	19	18	1.15	6.4	None	1,335.27	1	40	33.38	
	1920	1,388.97	18,047	71	21	1.63	7.7	None	468.63	5,809	21	21	23	1.86	8.1	None	1,669.48	1	40	41.74	
	1921	1,797.47	20,562	76	23	1.96	8.7	None	705.24	8,093	23	23	28	2.39	8.7	None	1,890.50	2	41	46.10	
	1922	1,965.07	22,020	80	23	2.09	8.8	None	700.17	8,095	25	25	28	2.43	8.6	None	1,207.01	1	26	46.42	
Creemore—																					
	1915	699.81	6,399	78	.....	.....	10.9	Flat	937.84	7,653	59	59	.....	.....	12.2	Flat	939.20	1	.....	.....
	1916	922.41	9,678	78	14	1.00	7.2	Flat	1,041.90	18,745	44	44	15	1.72	11.9	Flat	1,151.96	2	.....	.....
	1917	973.25	9,257	69	11	1.11	10.5	Flat	1,124.74	11,105	55	55	19	1.91	10.1	Flat	1,210.57	3	54	22.42	
	1918	1,070.46	10,159	88	10	1.13	10.4	Flat	1,098.57	10,328	51	51	16	1.72	10.6	Flat	1,357.87	3	54	25.14	
	1919	1,229.29	10,812	93	10	1.11	11.1	Flat	1,302.94	12,642	53	53	20	2.05	10.4	Flat	1,392.15	5	62	22.45	
	1920	1,448.31	15,168	130	10	93	9.3	Flat	1,413.24	14,558	52	52	23	2.26	9.7	Flat	1,516.26	6	68	22.30	
	1921	1,808.03	.....	111	.....	1.36	.....	Flat	1,683.94	19,383	55	55	29	2.39	8.7	Flat	1,422.65	6	69	20.62
	1922	1,811.54	19,254	122	14	1.30	9.4	Flat	1,506.73	17,375	59	59	25	2.20	8.6	Flat	1,425.85	6	65	21.94	

Dashwood— 1918 1919 1920 1921 1922	31	3,742	8	92	11.5	Flat	311.16	2,780	15	12	1.38	11.0	Flat	2,386.71	1	4651.88	47
	35	4,539	11	1.10	10.2		373.22	3,054	18	14	1.73	12.2		2,052.60	2	5338.73	55
	39	6,017	13	1.26	9.6		408.21	3,870	21	15	1.62	10.1		1,524.60	2	5229.32	62
	43	7,502	14	1.20	8.8		484.77	3,616	22	12	1.84	13.4		1,626.21	2	5430.11	67
	46	8,816	16	1.52	9.1		648.38	5,875	24	21	2.34	11.0		1,297.43	2	5025.95	72
Delaware— 1915 1916 1917 1918 1919 1920 1921 1922	22	.....	.....	.....	.....	None	114.18	.....	10	.....	.....	.....	None	.....	1	.....	33
	23	.....	.....	.....	.....		141.64	1,823	12	14	1.07	7.8		.....	.....	.....	35
	24	2,835	9	1.35	12.5		203.25	1,947	12	14	1.21	10.5		.....	.....	.....	36
	31	2,596	9	1.01	10.1		177.94	1,960	6	18	1.64	9.0		.....	.....	.....	37
	32	3,472	10	84	7.9		156.00	1,781	11	16	1.18	11.0		.....	.....	.....	43
	34	3,799	10	1.19	11.0		171.50	2,962	11	22	1.28	5.8		.....	.....	.....	45
	34	6,285	15	2.09	13.5		505.52	3,987	12	28	3.51	12.7		.....	.....	.....	54
	42	10,545	21	1.63	7.8		652.53	4,746	7	39	5.43	13.7		.....	.....	.....	52
Dereham Twp.— 1922	45	10,996	21	1.63	7.6		729.12	.....	.....	.....	.....	.....	.....	5,765.90	.....	.....	.....

Dorchester— 1915 1916 1917 1918 1919 1920 1921 1922	61	6,840	.....	.....	8.5	None	309.88	4,806	18	.....	.....	6.4	None	287.95	2	.....	81
	61	7,329	10	1.84	8.4		275.82	4,879	16	19	1.35	5.7		667.93	2	.....	79
	70	10,046	13	98	7.6		177.25	2,583	11	17	1.14	6.9		314.48	2	.....	83
	76	9,895	11	92	8.1		188.33	2,710	13	18	1.30	6.9		34.81	1	.....	90
	84	11,187	11	1.04	9.3		281.20	2,985	14	18	1.67	9.4		47.14	2	.....	100
	96	14,260	12	1.11	8.9		345.51	5,428	15	30	1.92	6.4		398.94	3	.....	144
	97	23,328	20	1.28	6.5		473.05	.....	15	.....	.....	.....		544.88	3	.....	115
Drayton— 1918 1919 1920 1921 1922	109	25,175	20	1.39	6.8		613.24	9,244	16	51	3.40	6.6		1,203.65	4	7316.49	129
	83	.....	.....	.....	.....	Flat	580.32	.....	40	.....	.....	.....	Flat	1,256.17	2	.....	125
	89	.....	11	1.34	12.9		973.35	7,450	42	15	1.93	13.1		1,542.15	1	4335.86	132
	110	11,060	15	1.20	7.8		1,250.48	15,960	30	44	3.47	7.8		2834.09	2	2834.09	142
	106	20,312	20	1.58	7.6		1,337.86	19,850	42	40	2.68	6.7		54.57	2	3733.07	.....
	117	25,263	25	1.56	6.2		1,588.41	27,843	33	61	3.48	5.7		1,223.58	2	.....	152
	.....	33,421	.....	.....	.....		.....	.....	.....	.....	.....	.....		1,566.95	2	.....	.....
Dresden— 1915 1916 1917 1918 1919 1920 1921 1922	185	.....	.....	.....	.....	Flat	1,223.25	.....	109	.....	.....	.....	Flat	.....	.....	.....	294
	197	26,473	12	87	7.5		1,986.21	30,352	106	24	1.54	6.5		102.04	1	520.58	303
	206	28,977	12	87	7.4		1,983.96	28,874	105	23	1.57	6.9		1,198.59	2	5521.79	312
	209	31,560	12	92	7.3		2,254.48	31,305	107	24	1.77	7.2		5,749.20	7	15636.85	318
	236	40,529	14	97	6.7		2,730.58	44,775	109	34	2.09	6.1		6,765.64	8	20632.84	352
	244	49,650	17	1.08	6.4		2,941.56	52,213	106	41	2.31	5.6		5,711.52	12	22325.61	375
	256	60,061	20	1.13	5.8		2,808.43	59,402	107	46	2.19	4.7		4,454.51	13	18823.69	399
	273	64,325	20	1.13	5.5		2,925.60	66,439	113	50	2.21	4.4		.....	.....	.....	.....

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Domestic light						Commercial light						Power						
	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per Kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers
Year	\$	kw-hrs.		kw-hr	\$ c.	cents	cents	\$	kw-hrs.		kw-hr	\$ c.	cents	cents	\$	c.		\$	c.
Drumbo—																			
1915	304.49	4,481	40	10	77	7.5	None	288.99	3,718	30	15	1.12	7.6	None	159.85	1			71
1916	340.75	4,298	35	10	81	8.1		277.43	4,084	22	15	1.14	7.4		116.57				57
1917	350.11	4,298	38	10	81	8.1		301.20	3,923	22	14	1.13	7.6						60
1918	392.90	4,592	44	9	79	8.5		299.10	3,923	22	14	1.13	7.6		43.15	1		221.57	76
1919	525.50	6,384	48	11	91	8.2		464.76	6,525	23	25	1.70	7.1		199.96	1		1020.00	72
1920	722.83	7,484	53	12	1.13	9.6		674.50	8,686	24	30	2.34	7.8		109.84	1		618.30	78
1921	949.84	8,490	54	13	1.47	11.2		671.94	8,500	24	29	2.33	7.9		312.34	1			79
1922	1,097.50	13,063	76	17	1.40	8.4		717.78	9,807	21	35	2.60	7.3		380.12	1		1038.01	98
Dublin—																			
1918	126.62		9				None	257.07		17				None	959.99	2			28
1919	186.54	2,400	13	15	1.20	7.8		352.06	4,660	18	22	1.63	7.6		826.23	2		2928.49	33
1920	393.82	5,312	21	21	1.56	7.4		423.54	5,249	15	28	2.35	8.4		1,095.00	3		3432.21	39
1921	503.50	5,920	21	23	1.99	8.5		562.44	5,816	19	24	2.47	9.7		1,172.31	2		3731.68	43
1922	574.41	7,599	20	31	2.39	7.5		664.68	6,929	22	28	2.76	9.5		1,027.27	3		3232.10	45
Dundalk—																			
1916	924.30		88				Flat	960.58		63				Flat	618.52	2			153
1917	926.52	12,065	80	12	92	7.7		872.71	12,718	76	15	1.05	6.9		876.00	4		27	160
1918	942.02	14,698	91	14	91	6.1		822.35	13,053	60	16	1.01	6.3		1,772.75	4		8221.61	155
1919	1,024.86	16,892	99	14	86	6.1		951.61	17,053	71	20	1.12	5.6		2,306.00	4		9424.54	174
1920	1,328.45	19,775	99	17	1.12	6.7		1,284.67	21,418	75	24	1.43	6.0		2,208.80	3		8525.99	177
1921	1,597.79	18,834	106	15	1.24	8.5		1,680.40	29,030	77	31	1.82	5.8		2,558.03	3		8430.45	186
1922	1,869.84	22,767	115	17	1.41	8.2		1,821.35	34,348	75	37	1.99	5.3		2,328.20	3		7730.24	193

Dundas—	1913	3,045.85	.....	.....	.....	.....	4,198.27	.....	134	.....	.....	.....	.....	27	.....	3,070.40	.....	538
	1914	5,349.24	.....	.....	.....	.....	4,198.64	.....	153	69	2.44	.....	.....	30	.....	6,305.96	.....	703
	1915	6,139.97	.....	.....	.....	.....	4,310.96	.....	160	84	2.29	.....	.....	37	.....	6,930.54	.....	810
	1916	6,925.46	.....	.....	.....	.....	4,714.78	.....	168	91	2.39	.....	.....	35	.....	10,915.58	.....	876
	1917	8,335.64	.....	.....	.....	.....	4,190.60	.....	175	75	2.04	.....	.....	38	.....	10,284.87	.....	996
	1918	9,361.34	.....	.....	.....	.....	4,428.66	.....	170	92	2.14	.....	.....	42	.....	9,077.00	.....	1,073
	1919	10,447.60	.....	.....	.....	.....	5,111.72	.....	145	123	2.77	.....	.....	38	.....	13,861.02	.....	814
	1920	8,244.97	.....	.....	.....	.....	5,239.16	.....	158	137	2.76	.....	.....	42	.....	21,725.24	.....	954
	1921	11,047.75	.....	.....	.....	.....	6,174.18	.....	170	136	3.03	.....	.....	50	.....	21,171.63	.....	1,068
	1922	12,521.50	.....	.....	.....	.....	6,386.36	.....	170	132	3.13	.....	.....	53	.....	24,467.72	.....	1,165
Dunnville—	1918	3,200.84	.....	.....	.....	.....	3,576.93	.....	108	.....	.....	.....	.....	7	.....	641.00	.....	258
	1919	2,540.80	.....	.....	.....	.....	5,352.52	.....	134	80	3.33	.....	.....	15	.....	4,649.29	.....	320
	1920	3,227.66	.....	.....	.....	.....	6,115.30	.....	141	93	3.61	.....	.....	16	.....	5,832.55	.....	362
	1921	3,982.33	.....	.....	.....	.....	6,971.57	.....	142	113	4.09	.....	.....	17	.....	5,881.01	.....	401
	1922	5,213.57	.....	.....	.....	.....	8,419.06	.....	157	113	4.67	.....	.....	18	.....	7,359.76	.....	465
Durham—	1916	1,518.72	.....	.....	.....	.....	1,057.33	.....	67	.....	.....	.....	.....	.....	.....	.....	.....	222
	1917	1,619.86	.....	.....	.....	.....	954.19	.....	71	26	1.12	.....	.....	1	.....	30.00	.....	242
	1918	1,812.80	.....	.....	.....	.....	1,067.28	.....	82	19	1.24	.....	.....	1	.....	782.44	.....	266
	1919	2,168.82	.....	.....	.....	.....	1,486.18	.....	83	24	1.50	.....	.....	1	.....	50.15.68	.....	284
	1920	3,095.24	.....	.....	.....	.....	2,182.30	.....	86	37	2.11	.....	.....	6	.....	50.14.27	.....	316
	1921	4,071.98	.....	.....	.....	.....	2,774.44	.....	87	39	2.66	.....	.....	8	.....	116.20.95	.....	347
	1922	4,480.34	.....	.....	.....	.....	3,068.96	.....	89	47	2.90	.....	.....	8	.....	8,893.04	.....	370
Dutton—	1915	318.85	.....	.....	.....	.....	206.59	.....	43	.....	.....	.....	.....	1	.....	.....	.....	152
	1916	1,353.04	.....	.....	.....	.....	960.27	.....	52	23	1.34	.....	.....	1	.....	135.31	.....	165
	1917	1,381.08	.....	.....	.....	.....	967.98	.....	54	26	1.49	.....	.....	1	.....	73.76	.....	169
	1918	1,420.59	.....	.....	.....	.....	1,007.14	.....	62	22	1.44	.....	.....	3	.....	1,001.85	.....	192
	1919	1,640.83	.....	.....	.....	.....	1,105.10	.....	70	24	1.32	.....	.....	3	.....	2,539.93	.....	212
	1920	1,835.49	.....	.....	.....	.....	1,324.59	.....	71	29	1.73	.....	.....	3	.....	2,539.98	.....	229
	1921	2,035.51	.....	.....	.....	.....	1,410.52	.....	75	40	1.57	.....	.....	3	.....	2,483.44	.....	237
	1922	2,163.68	.....	.....	.....	.....	1,498.41	.....	73	40	1.68	.....	.....	4	.....	2,547.27	.....	249

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Year	Domestic light						Commercial light						Power				Total number of consumers	
		Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Number of consumers		Average horsepower
Elmira—	1914	1,908.41	20,875	158	13	1.00	9.5	11.4+	2,020.81	28,490	65	32	1.85	7.1	11.4+	1,876.49	8		231
	1915	2,059.11	27,576	185	13	1.00	7.5	10	1,674.44	28,368	85	32	1.85	5.9		2,801.33	10		280
	1916	2,211.16	30,817	233	12	88	7.2		1,665.69	35,515	92	33	1.56	4.7		3,635.22	12		338
	1917	2,383.62	38,918	238	14	84	6.1		1,854.61	47,159	91	43	1.70	3.9		3,613.47	13		342
	1918	2,701.28	51,735	243	17	93	5.2		1,988.36	54,317	89	50	1.84	3.6		4,277.44	14		346
	1919	3,206.49	68,574	269	21	98	4.7		2,207.99	68,820	79	73	2.33	3.2		4,621.96	13		361
	1920	4,582.08	123,941	313	33	1.22	3.7		2,821.51	82,169	94	73	2.50	3.4		6,117.79	15		422
	1921	5,990.36	191,037	348	46	1.43	3.1		3,082.61	95,700	98	81	2.62	3.2		8,020.20	22		468
	1922	7,142.86	270,347	383	61	1.63	2.6		4,014.00	103,874	98	88	3.41	3.8		11,132.93	21		502
	Elmvale—	1913	284.34		52				None	358.60		52						1		105
1914		673.18	6,856	57	10	1.03	9.9		896.11	15,402	48	25	1.49	5.8		438.38	2		107
1915		704.12	7,728	78	10	87	9.1		778.93	16,193	64	25	1.16	3.9		1,186.44	2		144
1916		816.74	10,562	81	11	85	7.7		736.74	18,644	62	25	97	5.0		1,043.96	3		146
1917		881.20	11,868	89	11	86	7.4		696.79	13,041	61	19	95	5.3		810.96	3		153
1918		941.28	12,895	91	11	87	7.2		873.52	16,755	57	23	1.23	5.2		3,699.00	4		152
1919		1,027.05	13,781	98	12	87	7.2		1,030.63	18,028	57	26	1.51	5.8		3,860.83	5		160
1920		1,313.94	16,383	101	13	1.08	8.0		1,120.45	22,548	63	30	1.48	4.9		3,722.19	5		169
1921		1,491.09	17,927	100	15	1.24	8.3		1,501.27	21,738	64	28	1.96	6.9		4,239.56	7		171
1922		1,628.91	22,950	109	18	1.30	7.1		1,437.30	27,523	59	37	1.96	5.2		3,796.04	10		178
Elmwood—	1918	282.62		30				None	83.93		15						1		46
	1919	467.59	6,266	32	16	1.22	7.5		196.91	2,858	17	14	96	6.9		1,429.31	1		50
	1920	592.57	7,950	33	20	1.50	7.4		351.78	5,273	19	24	1.63	6.8		1,514.17	1		53
	1921	762.83	8,570	38	19	1.67	8.9		545.58	5,970	17	29	2.67	9.1		1,802.31	1		56
	1922	792.14	8,528	35	20	1.83	9.2		528.92	5,710	19	26	2.44	9.2		1,345.94	1		55

Elora—	1915	1,044.49	14,009	89	.....	7.4	10+25	1,820.07	25,431	60	.....	7.1	10+25	197.78	1	.....	150
	1916	1,253.03	20,500	105	1.08	6.1	.....	1,828.25	27,945	63	38	2.48	.....	972.12	2	.....	170
	1917	1,400.12	31,600	123	1.02	4.4	.....	1,937.30	40,200	64	52	2.52	4.8	3,640.75	2	120 30.34	189
	1918	1,537.70	28,173	134	1.18	5.2	.....	1,765.65	34,357	59	46	2.39	.....	5,087.10	2	162 31.40	195
	1919	1,809.72	34,910	139	1.09	5.4	.....	2,093.34	45,935	65	59	2.65	4.5	7,440.12	3	242 30.74	207
	1920	2,256.60	49,514	186	2.01	4.6	.....	2,362.02	57,754	70	69	2.81	4.1	6,997.35	3	212 33.01	259
	1921	2,590.55	61,731	205	2.05	4.2	.....	2,394.68	52,436	68	64	2.94	4.6	6,144.11	3	215 28.58	276
	1922	3,407.43	74,104	246	2.27	4.6	.....	2,902.98	69,703	70	84	3.50	4.1	8,386.26	3	264 31.77	319
Embro—	1915	400.50	.....	65	.....	.....	None	489.67	.....	30	.....	.....	None	.....	.....	.....	95
	1916	633.95	5,690	58	.....	11.1	.....	598.41	10,333	29	29	1.66	5.8	155.54	2	.....	89
	1917	664.53	5,391	60	8	94	12.3	522.37	6,322	31	18	1.45	8.2	132.76	2	.....	93
	1918	708.60	6,811	64	9	95	10.4	603.76	5,708	36	14	1.50	10.5	267.29	3	13 20.56	103	
	1919	963.98	10,443	66	13	1.22	9.2	809.77	8,631	35	20	1.93	9.4	979.29	3	34 28.80	104	
	1920	1,189.47	11,670	71	14	1.40	10.0	1,073.32	8,358	31	22	1.88	12.8	1,722.08	3	51 33.72	105	
	1921	1,512.70	13,012	73	15	1.73	11.6	1,234.16	10,559	36	24	2.86	11.7	1,930.84	3	50 38.62	112	
	1922	1,601.30	14,321	81	16	1.73	11.1	1,385.94	10,931	31	27	3.49	12.6	1,712.69	3	48 35.68	115	
Etobicoke Twp.—	1918	16,081.39	.....	.....	.....	.....	8+25	1,816.74	.....	.....	.....	.....	8+25	5,027.80	.....	.....	937
	1919	11,905.18	864	.....	.....	.....	.....	1,567.41	.....	60	.....	.....	.....	5,010.68	13	236 21.23	.....
	1920	17,352.35	129,700	1,140	.....	.....	.....	1,985.92	40,600	77	.....	.....	.....	5,078.76	12	253 20.07	1,229
	1921	21,326.96	441,178	1,515	24	1.17	4.8	2,734.25	56,592	83	57	2.74	4.8	5,076.25	14	295 17.21	1,612	
	1922	29,162.15	639,888	2,166	28	1.32	4.5	3,737.70	116,924	130	91	2.93	3.2	6,019.24	14	295 20.40	2,310	
	Exeter—	1917	2,030.27	25,524	170	13	99	7.9	1,784.53	21,152	87	20	1.71	8.4	2,363.60	3	92 25.69	260
1918		2,327.79	29,434	187	14	1.10	7.9	1,803.63	21,753	84	21	1.75	8.2	4,163.70	3	140 29.74	274	
1919		2,806.26	41,835	211	16	1.11	6.9	2,383.33	30,522	88	29	2.26	7.8	4,159.40	5	143 29.09	304	
1920		3,402.65	50,578	234	18	1.22	6.7	2,558.70	34,103	94	30	2.27	7.5	4,398.97	7	162 27.16	335	
1921		4,196.23	88,361	278	26	1.26	4.7	2,815.15	43,927	90	41	2.61	6.4	4,916.13	7	182 27.01	375	
1922		5,217.29	133,719	304	38	1.49	3.9	3,069.92	48,291	92	44	2.81	6.3	5,270.23	8	187 28.18	404	
Fergus—		1915	1,314.03	19,328	114	6.8	10+25	2,367.91	37,844	91	10+25	882.24	7	212
		1916	1,621.27	24,275	149	16	1.03	6.7	2,111.16	34,953	92	32	2.00	6.0	2,819.21	7	248
	1917	1,822.14	29,351	177	15	93	6.2	2,028.47	37,127	93	33	1.82	5.5	1,959.57	8	67 29.25	278	
	1918	2,086.39	42,774	198	19	92	4.8	2,099.60	44,824	87	41	1.94	4.6	3,332.50	10	125 26.66	295	
	1919	2,629.72	47,157	212	19	1.03	5.5	2,699.88	60,017	86	58	2.68	4.5	3,573.66	10	153 23.36	308	
	1920	3,030.75	58,538	291	17	87	5.2	2,775.01	51,512	96	45	2.41	5.4	3,522.57	12	152 23.17	399	
1921	4,072.20	70,683	310	19	1.10	5.7	3,873.68	74,448	100	62	3.23	5.2	4,191.93	15	224 18.71	425		
1922	6,037.68	143,806	342	36	1.54	4.2	4,011.60	82,405	103	67	3.30	4.8	5,555.43	15	261 21.29	460		

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Domestic light					Commercial light					Power								
	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers
Year	kw-hrs.	kw-hr	\$ c.	cents	cents	None	cents	\$ c.	kw-hrs.	kw-hr	kw-hr	\$ c.	cents	cents	\$ c.	c.		\$ c.	
Flesherton—																			
1916	568.76		73	9	74	7.4	None	423.83		30	31	20	1.04	5.1	None				103
1917	621.93	8,364	70	11	81	9.3		387.92	7,545	28	18	1.20	6.4						101
1918	593.44	8,116	52					426.20	6,647	37									81
1919	725.42		70					437.61		39									109
1920	1,152.24		85		1.13			763.00		37		1.62							125
1921	1,585.13	17,321	85	17	1.55	9.1		1,278.80	17,987	37	40	2.88	6.5						123
1922	1,791.37		88					1,466.00		39									128
Ford City—																			
1922	6,501.74		912					1,745.29		112									
Forest—																			
1917			260	9	90	9.9	10			104					10				
1918	2,890.91	28,976	268					1,899.09	16,504	100	13	1.55	11.5						370
1919	3,307.14	33,720	281	10	97	9.8		2,187.74	22,253	116	16	1.57	9.8						376
1920	4,406.18	41,264	311	12	1.16	9.8		2,696.04	25,704	102	21	2.20	10.5						427
1921	5,366.42	54,057	337	13	1.33	9.9		3,348.69	37,018	106	30	2.63	9.0						458
1922	5,784.92	71,850	375	17	1.35	8.0		3,550.92	46,906	102	37	2.83	7.5						497
Galt—																			
1912	8,183.69		830		1.22		11	9,732.86		250					11				1,127
1913	10,535.38		1,122		1.10			11,648.49		353									1,540
1914	15,797.16	300,121	1,745	20	1.08	5.3		11,952.75	289,857	339	68	2.80	4.1						2,154
1915	17,024.42	512,443	2,038	23	75	3.3		8,794.36	350,788	375	92	2.10	2.3						2,488
1916	19,961.17	716,396	2,236	28	78	2.8		10,485.26	532,860	386	115	2.30	2.0						2,701
1917	24,248.31	1,023,106	2,444	36	86	2.4		12,082.97	694,661	371	156	2.71	1.7						2,898
1918	26,901.52	1,221,416	2,460	41	91	2.2		12,190.29	602,628	371	135	2.73	2.0						2,918
1919	29,669.11	1,409,698	2,594	46	96	2.1		13,856.90	696,221	381	152	3.03	2.0						3,075
1920	38,460.34	1,925,475	2,766	58		2.0		17,575.07	856,285	404	176	3.63	2.0						3,273
1921	44,879.01	2,460,073	2,962	70	1.26	1.8		19,055.01	963,067	417	192	3.81	2.0						3,485
1922	61,672.58	3,408,568	3,092	92	1.66			23,325.29	1,122,766	442	212	4.40	2.0						3,652

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Year	Domestic light						Commercial light						Power					
		Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Number of consumers	Average horsepower per horsepower cost \$ c.	Total number of consumers
Gravenhurst—	1917	2,350.79	39,025	251	13	78	6.0	Flat	4,412.55	171,716	69	207	5.33	2.6	Flat	4,892.05	9	292	329
	1918	1,995.82	37,930	264	12	64	5.2		4,624.55	141,329	59	184	5.89	3.2		4,786.06	8	352	331
	1919	2,326.25	51,625	269	16	72	4.5		4,901.04	196,134	74	221	5.52	2.5		4,991.09	10	313	353
	1920	2,832.40		290		81			4,762.31		80					6,576.74	12		382
	1921	4,219.34	69,942	294	20	1.20	6.0		6,239.31	214,246	75	238	6.93	2.9		5,528.86	12	213	381
	1922	5,284.76	83,449	338	22	1.39	6.3		3,445.13	88,109	78	95	3.73	3.9		8,246.95	11	302	427
Guelph—	1912	10,251.87		960				8+25	16,400.57		345					30,139.00	73		1,378
	1913	11,528.07	224,373	1,260	17	87	5.2		15,075.61	287,561	400	67	3.38	5.2		42,091.34	85		1,745
	1914	16,920.54	286,032	1,573	17	1.00	5.9		15,923.51	325,080	441	65	3.16	4.9		38,148.46	80		2,094
	1915	15,514.10	366,928	1,824	18	76	4.2		12,692.86	437,567	474	83	2.32	2.8		38,404.28	81		2,379
	1916	17,221.76	469,528	2,033	20	74	3.7		13,710.72	522,526	490	91	2.36	2.6		48,369.83	86		2,609
	1917	19,379.44	594,936	2,202	23	77	3.3		13,760.01	576,911	505	97	2.31	2.4		57,380.71	87		2,794
Hagersville—	1918	21,594.80	666,422	2,380	24	78	3.2		13,070.44	589,498	512	96	2.14	2.2		62,480.67	83		2,975
	1919	25,157.62	862,801	2,677	27	89	3.3		15,487.44	783,989	529	123	2.47	2.0		3,496.17	87		3,295
	1920	30,371.10	1,152,485	3,064	32	83	2.6		19,523.95	905,198	548	138	2.92	2.2		54,810.39	89		3,705
	1921	38,421.71	1,422,305	3,292	36	97	2.7		23,439.07	987,198	579	142	3.37	2.4		69,534.96	93		3,961
	1922	47,212.44	2,000,093	3,610	48	1.14	2.3		28,146.36	1,154,197	601	163	3.97	2.4		72,549.55	90		4,314
								None	*			24				89,341.42	103		4,314
Hagersville—	1913	81.92		3				None	*		24					746.85	3		30
	1914	1,222.23	16,053	70						6,446	60					2,679.08	3		133
	1915	1,172.85	23,213	114	21	1.06	5.4		1,592.59	22,676	73	28	1.99	5.2		2,434.62	3		190
	1916	1,606.80	30,025	127	21	1.11	5.4		1,343.82	27,840	69	32	1.58	4.8		2,527.92	4		200
	1917	1,602.64	29,611	138	19	1.01	5.4		1,252.54	34,696	68	42	1.54	3.6		2,289.37	4		210
	1918	1,624.89	32,496	140	19	97	5.0		1,299.96	42,757	68	52	1.59	3.0		2,632.30	3		311
Hagersville—	1919	1,808.19	42,127	148	24	1.02	4.3		1,400.40	49,344	78	53	1.50	2.8		88,26.86	6		232
	1920	2,132.34	58,634	170	29	1.04	3.6		1,611.37	60,494	75	67	1.79	2.7		242,28.40	10		255
	1921	2,340.28	69,826	179	32	1.09	3.3		1,928.84	85,482	83	86	1.94	2.2		308,29.64	10		272
	1922	2,630.39	80,478	203	35	1.15	3.2		2,631.95	103,369	88	100	2.55	2.5		446,29.87	10		303

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Domestic light							Commercial light							Power				
	Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents 10+15	Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents 10+15	Revenue \$ c.	Number of consumers	Average horsepower	Average cost per horsepower \$ c.	Total number of consumers
Hesper—	1913	2,189.00	174	14	1.09	7.6	10+15	1,684.75	35,979	76	37	2.00	5.4	10+15	5,044.30	11	.....	.....	261
	1914	2,635.41	34,848	229	11	1.09	7.0	1,934.75	39,657	85	38	2.22	5.9	.....	6,116.27	13	.....	.....	327
	1915	2,787.48	39,580	272	11	90	7.0	2,334.15	44,900	90	43	1.93	4.5	.....	9,017.58	14	.....	.....	376
	1916	3,011.73	54,239	277	17	92	5.5	2,012.28	44,900	84	43	1.93	4.5	.....	11,177.71	12	.....	.....	273
	1917	3,679.79	66,932	312	19	1.04	5.5	2,389.80	53,306	86	52	2.18	4.5	.....	10,166.33	11	394	25.80	409
	1918	3,835.53	77,373	336	19	98	4.9	2,024.34	49,635	83	48	1.99	4.0	.....	9,186.08	13	357	25.73	432
	1919	4,286.70	92,959	374	21	96	4.6	2,194.16	68,184	84	68	2.18	3.2	.....	6,554.78	11	299	21.92	469
	1920	5,626.85	137,540	442	26	1.06	4.1	2,414.32	69,459	89	65	2.26	3.5	.....	8,162.54	13	410	19.90	544
	1921	6,648.35	178,741	480	31	1.15	3.7	2,803.97	87,965	95	74	2.46	3.2	.....	7,239.45	17	387	18.71	592
	1922	8,011.51	235,605	545	38	1.30	3.4	3,324.81	102,091	103	94	2.79	3.2	.....	10,230.23	19	498	20.54	667
Highgate—	1917	416.49	4,447	41	9	85	9.4	467.76	4,373	21	17	1.86	10.7	None	.....	1	.....	.....	63
	1918	456.79	5,342	45	10	88	8.5	502.27	4,880	25	17	1.81	10.2	.....	2,556.33	3	76	33.63	73
	1919	618.65	6,410	51	11	1.01	9.2	598.12	7,224	29	21	1.72	8.3	.....	2,071.70	3	79	26.22	83
	1920	861.91	9,042	59	14	1.22	8.7	738.31	8,264	30	23	2.05	8.9	.....	1,675.67	6	70	23.94	95
	1921	1,065.47	11,736	61	16	1.46	9.1	879.37	12,613	31	34	2.36	7.0	.....	1,318.16	6	39	33.80	98
	1922	1,092.54	13,118	69	17	1.40	8.3	925.94	12,151	32	32	2.45	7.6	.....	1,606.09	5	70	22.94	106
Holstein—	1917	238.48	2,366	26	8	86	10.1	209.74	2,672	15	15	1.17	7.9	None	.....	.....	.....	.....	41
	1918	256.54	1,957	27	6	80	13.1	263.55	2,505	16	13	1.41	10.5	.....	.....	.....	.....	43	
	1919	308.37	2,899	28	9	92	10.6	228.57	3,055	18	14	1.06	7.5	.....	752.37	1	27	27.87	47
	1920	459.38	5,368	29	16	1.32	8.5	405.80	2,883	18	13	1.88	14.1	.....	109.47	1	7	15.63	48
	1921	510.16	3,864	27	12	1.57	13.2	472.86	.....	18	.....	.....	.....	.....	215.76	1	730	82	46
	1922	653.43	3,318	32	.....	.....	.....	610.58	3,773	20	.....	.....	.....	.....	172.68	1	712	67	53

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality		Domestic light						Commercial light						Power						
		Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers
Kingston—																				
1918	27,760.31	396,512	1,873	21	1.24	6.0	10	45,743.73	686,846	685	106	5.41	5.1	10	32,025.98	104	1,576.27	11	2,662	
1919	32,247.30	537,657	2,166	23	1.13	4.8	10	49,268.27	966,250	759	126	5.41	4.1	10	42,710.51	112	1,818.22	11	3,037	
1920	36,308.98	751,367	2,677	28	1.20	4.3	10	47,611.14	1,167,246	772	126	5.11	4.0	10	40,763.23	115	1,818.22	11	3,564	
1921	45,106.18	1,044,514	3,122	36	1.45	4.0	10	49,129.35	1,229,740	802	128	5.11	4.0	10	45,835.78	124	2,295.19	11	4,047	
1922	57,519.97	1,435,616	3,498	36	1.45	4.0	10	58,501.36	1,331,863	787	139	6.14	4.4	10	55,428.85	131	2,808.19	11	4,416	
Kincardine—																				
1922	6,461.15	103,210	344	25	1.56	6.2		4,057.97	44,142	113	32	2.99	9.2		2,950.97	12	127.23	24	469	
Lambeth—																				
1915	344.47	2,991	49	11	1.91	8.4	None	119.00	1,042	9	13	1.58	8.3	None	559.82	1	1		59	
1916	575.65	6,880	54	11	1.04	9.4	None	208.96	2,577	13	16	1.62	9.8	None	249.36	1	1		68	
1917	721.51	7,655	65	11	1.04	9.4	None	252.56	2,577	13	16	1.62	9.8	None	182.50	1	1		79	
1918	833.23	9,978	63	13	1.08	8.3	None	208.28	1,976	11	13	1.44	10.5	None	392.22	1	5		75	
1919	935.30	10,761	75	12	1.04	8.7	None	289.64	2,701	16	14	1.51	10.7	None	309.87	2	35		93	
1920	1,242.88	14,627	72	18	1.55	8.5	None	339.28	3,179	14	19	2.02	10.7	None	312.00	2	12	26.00	88	
1921	1,616.48	18,667	86	18	1.57	8.6	None	414.56	4,341	22	16	1.57	9.5	None	305.58	2	35		110	
1922	1,931.32	28,023	103	25	1.69	6.9	None	525.13	5,298	22	20	1.99	9.9	None	326.27	2	20	16.31	127	
Lakefield—																				
1920	571.45	29,135	130	14	1.98	6.9	Flat	336.69	153,601	62	56	3.68	6.6	Flat	1,328.30	4	100	31.34	196	
1921	2,003.69	42,999	170	20	1.30	6.4	Flat	2,342.58	40,417	56	66	3.68	6.6	Flat	3,134.24	6	59	33.76	232	
1922	2,765.70	42,999	183	20	1.30	6.4	Flat	2,694.98	40,417	66	55	3.68	6.6	Flat	1,992.23	2	59	33.76	251	
Lanark—																				
1922	1,735.71	17,837	81	17	1.78	9.7		1,547.66	10,391	27	32	4.78	14.9		109.71	2	618.29		110	

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

		Domestic light						Commercial light						Power						
Municipality	Year	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers
		\$ c.	kw-hrs.		kw-hr	\$ c.	cents	cents	\$	kw-hrs.		kw-hr	\$ c.	cents	cents	\$	c.		\$ c.	
Lynden—	1916	254.76	3,500	24	17	1.35	7.3	None	227.57	4,430	10	11	1.75	5.1	None	650.38	1	84	34.68	35
	1917	272.49	3,498	24	17	1.35	7.7	None	213.11	3,576	11	11	1.75	5.9	None	2,912.96	1	76	36.45	36
	1918	304.17	4,971	25	17	1.35	6.1	None	231.50	5,914	11	44	1.75	3.9	None	2,770.26	1	85	38.27	37
	1919	444.75	7,553	47	13	1.79	5.9	None	347.65	9,897	16	52	1.81	3.5	None	3,291.51	1	86	39.63	64
	1920	897.94	13,406	51	22	1.47	6.7	None	435.63	10,185	16	53	2.27	4.3	None	3,408.62	1	87	41.19	68
	1921	1,191.73	17,888	57	26	1.74	6.6	None	478.11	10,462	18	48	2.21	4.6	None	3,583.76	1	99	33.44	76
	1922	1,343.50	24,227	66	32	1.78	5.7	None	455.15	9,288	15	48	2.37	4.9	None	3,310.64	1			82
Markham—	1920	1,735.33	27,616	130	14	1.61	11.8	10+25	790.25	9,248	33	19	2.59	14.1	10+25	577.79	4	35		167
	1921	3,263.60	38,147	169	12	1.45	8.2		1,303.84	11,837	42	23	2.57	11.2		2,588.67	6	45	57.53	247
	1922	3,116.38		189					1,325.79		45					2,555.90	6	68	37.59	240
Markdale—	1917	1,241.47	28,763	106	19	1.08	5.6	10	1,105.58	24,481	68	32	1.22	3.8	10	718.89	3			177
	1918	1,672.90	29,830	108	19	1.28	6.7		862.43	26,180	66	32	1.65	5.0		697.58	5	51		179
	1919	1,611.23	48,407	124	19	1.32	5.1		937.23	25,982	64	33	1.96	6.0		1,140.94	2			190
	1920	2,054.17		114	26				1,321.06		69	75				1,513.24	8	94	16.09	233
	1921	2,496.08		158					1,550.66		66					1,414.47	9	92	15.37	234
	1922	2,623.46		149					1,695.41		75					1,172.56	10	88	13.32	234
Marmora—	1922	2,150.59	19,097	110	14	1.63	11.2		1,609.85	12,939	43	25	3.12	12.4		159.42	3	8	19.93	156
Martintown—	1922	514.19	6,150	25	21	1.71	8.3		452.72	4,293	11	33	3.43	10.5						36
Maxville—	1922	2,003.68	21,472	86	21	1.94	9.3		2,079.24	20,860	58	30	2.99	9.9		507.53	2	41	12.38	146

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Year	Domestic light						Commercial light						Power				Total number of consumers		
		Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Av'g monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Av'g monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Number of consumers		Average horsepower	Average cost per horsepower \$ c.
Niagara Falls—																				
	1916	21,733.29	.....	2,050	.....	.....	.....	3.5	13,259.02	.....	400	.....	2.27	1.7	Flat	9,613.01	80	.....	.....	2,530
	1917	22,566.76	867,639	2,273	31	99	2.6	.....	11,012.51	651,884	405	134	2.27	1.7	.....	18,804.36	55	713	13.49	2,733
	1918	26,423.31	882,174	2,447	31	93	2.9	.....	10,692.04	528,376	418	107	2.16	2.0	.....	22,242.65	61	1,480	15.03	2,926
	1919	33,221.90	1,419,901	2,648	45	1.05	2.4	.....	12,639.15	899,210	456	164	2.31	1.4	.....	24,686.72	75	1,905	12.96	3,179
	1920	46,839.29	2,378,263	2,907	68	1.34	2.0	.....	15,366.26	909,516	488	155	2.62	1.7	.....	28,739.95	86	2,102	13.67	3,481
	1921	59,722.54	3,598,610	3,048	99	1.63	1.6	.....	21,208.21	1,376,527	528	217	3.35	1.5	.....	33,220.24	90	2,505	13.26	3,666
	1922	72,634.03	4,718,606	3,163	127	1.95	1.5	.....	26,699.31	2,140,826	542	334	4.16	1.2	.....	38,485.41	93	2,687	14.32	3,798
Niagara-on-the-Lake—																				
	1919	.....	.....	274	.....	.....	.....	.....	.....	.....	58	.....	.....	.....	.....	.....	5	.....	.....	337
	1920	5,544.75	.....	275	.....	1.68	.....	.....	2,796.38	.....	69	.....	3.38	.....	.....	1,301.68	5	78.16	69	349
	1921	5,847.10	.....	306	.....	1.60	.....	.....	3,291.89	.....	74	.....	3.71	.....	.....	2,544.90	6	121.21	.....	386
	1922	5,769.68	156,879	319	42	1.54	3.7	.....	2,777.10	71,474	77	79	3.09	3.7	.....	2,467.05	7	99.24	92	403
Norwich—																				
	1912	862.17	.....	128	.....	.....	.....	10+25	674.48	.....	64	.....	.....	.....	.....	263.93	2	.....	.....	194
	1913	1,926.78	28,172	166	15	1.09	6.8	.....	1,162.98	17,917	76	20	1.38	6.5	.....	1,978.55	3	.....	.....	245
	1914	2,168.13	35,578	198	16	99	6.2	.....	995.16	20,690	84	22	1.04	6.4	.....	1,893.72	3	.....	.....	285
	1915	2,529.91	37,082	228	16	99	6.2	.....	1,075.79	25,880	80	26	1.09	4.2	.....	2,169.31	5	.....	.....	313
	1916	2,319.58	49,858	254	18	84	4.7	.....	1,168.34	24,909	87	25	1.16	4.7	.....	2,642.97	6	.....	.....	327
	1917	8,132.02	55,968	356	16	.....	.....	.....	1,198.97	24,854	82	25	1.19	4.8	.....	4,116.38	10	137.30	05	448
	1918	3,042.12	87,510	242	30	1.06	3.4	.....	1,064.13	23,559	78	24	1.11	4.5	.....	2,481.63	8	87.28	52	328
	1919	3,529.64	101,324	280	30	1.05	3.5	.....	1,566.15	34,149	76	37	1.55	4.5	.....	2,370.22	8	97.24	44	364
	1920	4,136.42	118,478	291	34	1.18	3.5	.....	1,915.42	42,434	84	42	1.90	4.5	.....	2,902.47	10	111.26	15	385
	1921	4,824.49	155,413	305	42	1.32	3.2	.....	2,235.71	48,524	85	48	2.20	4.6	.....	3,022.99	7	118.25	62	397
	1922	5,209.87	161,790	330	43	1.37	3.2	.....	2,436.17	55,865	92	53	2.31	4.4	.....	2,426.59	8	113.21	47	430

Norwood—		161	19	1.25	6.6	1,627.72	22,199	66	28	2.06	7.3	744.35	4	42	17.72	231
1922 2,413.40		36,746														
Oil Springs—					None											
1918	87.68	18				73.85		7				2,240.03	2			27
1919	214.44	20				173.97		10				4,151.58	3			33
1920	366.49	20				319.75		12				5,684.03	6			38
1921	701.04	42	21	1.39	6.6	503.46	6,975	17	34	2.40	7.2	6,970.28	33	177	39.38	92
1922	795.54	48	23	1.47	6.3	527.91	7,023	21	31	2.32	7.5	12,387.37	35	285	43.46	104
Omemee—					Flat											
1918	480.37	58				419.07		23				54.78	3			84
1919	733.28	70	12	87	7.0	623.24	9,530	29	24	1.79	7.5	670.27	5	39	17.19	104
1920	999.89	83				681.07		24				248.29	5			112
1921	1,213.80	84		1.20		781.01		30		2.17		2,081.00	6	133	15.65	120
1922	1,543.01	92	22	1.46	6.8	846.54	13,548	31	38	2.35	6.2	4,269.89	7	147	29.25	130
Orangeville—					10											
1917	1,641.42	144	13	95	7.2	1,903.38	32,805	82	33	1.93	5.8	2,902.60	4	133	22.58	230
1918	1,891.77	155	17	1.05	6.2	2,081.03	44,300	90	42	2.01	4.6	3,197.89	5	97	32.96	250
1919	2,390.39	179	19	1.11	6.0	2,352.35	62,441	97	54	2.02	3.8	3,797.70	7	141	26.93	283
1920	2,891.19	199	21	1.21	5.8	2,852.54	47,302	94	42	2.53	6.0	4,127.67	10	208	19.84	303
1921	3,660.49	221	24	1.38	5.7	3,707.47	76,793	95	67	3.25	4.8	4,211.74	10	160	26.32	326
1922	4,207.55	265	26	1.44	5.6	4,231.79	78,433	101	67	3.60	5.4	5,213.52	12	230	22.67	378
Ottawa—					7+8											
1912	62,598.18	5,390				51,365.91		440				25,299.94	90			5,920
1913	68,032.27	5,766		1.02		53,438.04		818		7.08		26,978.76	152			6,736
1914	68,767.48	6,342	19	95	5	51,769.72	1,061,263	852	106	5.16	4.9	31,748.23	156			7,350
1915	67,441.19	7,338	22	82	3.8	46,636.99	1,501,978	1,060	131	4.07	3.1	32,126.50	140			8,538
1916	72,875.12	7,912	23	80	3.4	42,569.96	1,786,603	1,107	137	3.27	2.4	42,996.39	188			9,207
1917	81,506.24	8,636	24	82	3.4	48,546.77	2,048,160	1,167	150	3.57	2.4	63,173.09	204	3,553	17.72	10,007
1918	88,020.83	9,047	31	82	2.3	50,733.92	2,358,017	1,182	167	3.59	2.1	64,655.78	207	4,743	13.63	10,436
1919	97,402.16	9,976	45	90	2.0	52,187.97	3,235,802	1,212	212	3.59	1.6	63,255.59	205	4,401	14.37	10,393
1920	109,844.13	9,451	53	97	1.8	62,833.70	3,248,561	1,278	212	4.10	1.9	61,681.26	210	4,531	13.61	10,939
1921	131,863.72	8,056,660	67	1.10	1.6	67,251.51	3,674,286	1,349	227	4.15	1.8	63,333.74	228	4,685	13.52	11,532
1922	154,936.08	11,363,704	93	1.26	1.4	80,732.27	4,332,772	1,415	261	4.87	1.9	37,483.22	229	3,190	11.75	12,137
Otterville—					None											
1917	537.88	42				290.37		23				47.44	1			66
1918	615.32	47	14	1.15	7.9	272.50	3,665	22	13	1.01	7.4	912.05	2	22	41.45	71
1919	861.40	62	15	1.16	7.7	440.31	2,350	15	13	2.45		982.80	4	26	37.80	81
1920	1,156.08	70	18	1.38	7.8	648.41	7,818	20	33	2.70	8.3	1,770.64	4	43	41.18	94
1921	1,421.89	84	15	1.41	9.4	760.43	7,774	17				1,401.36	4	43	32.59	105
1922	1,446.48	85	16	1.42	9.1	717.09	7,600	20	35	3.32	9.4	1,388.67	4	43	32.29	109

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Year	Domestic light						Commercial light						Power				Total number of consumers		
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers		Average horsepower	Average cost per horsepower
Owen Sound—\$ c.																				
1916	16,003.61	225,620	1,376	16	93	7.1	6.4+15	23,724.21	388,717	435	67	2.71	6.1	6.4+15	13,772.61	83	1,894	1,176.24	37	1,894
1917	15,740.76	266,322	1,438	17	91	5.9	4.1	13,809.15	341,361	419	69	2.84	4.1	28,667.22	84	1,941	1,177.27	25	1,941	
1918	16,071.58	310,256	1,492	17	91	5.1	4.1	14,011.58	341,751	403	69	2.84	4.1	32,069.70	84	1,979	1,005.23	17	1,979	
1919	17,879.28	605,348	1,611	31	93	3.0	2.9	13,931.89	521,847	418	104	2.78	2.7	23,289.00	92	2,121	1,231.20	02	2,121	
1920	21,798.24	719,181	1,861	32	97	3.0	2.9	15,160.58	520,485	449	97	2.81	2.9	24,645.87	105	2,415	1,231.20	02	2,415	
1921	26,511.72	700,833	2,075	28	106	3.8	2.2	16,442.16	730,759	457	133	3.00	2.2	29,116.14	109	2,641	1,403.20	75	2,641	
1922	31,744.31	955,010	2,285	35	112	3.3	2.6	18,851.65	728,910	460	133	3.43	2.6	30,538.65	115	2,860	1,567.19	49	2,860	
Palmerston—																				
1916	6,102.25	32,672	151	16	1.22	7.7	Flat	282.57	51,029	63	60	3.26	5.5	1,225.68	1	215	57.21	50	215	
1917	2,506.76	33,104	171	11	1.22	7.7	5.3	2,780.86	50,847	71	60	3.24	5.3	1,401.26	2	244	57.24	58	244	
1918	2,563.63	52,780	213	21	1.27	6.2	6.1	3,344.29	54,590	75	61	7.2	6.1	2,161.21	4	248	85.25	43	248	
1919	3,253.16	124,555	234	36	1.53	4.2	4.5	4,036.64	90,508	75	101	4.00	4.5	3,235.10	5	314	128.25	27	314	
1920	4,283.77	124,636	255	41	1.62	4.0	5.0	4,736.84	95,314	80	99	4.93	5.0	4,581.69	6	341	171.26	79	341	
1921	5,035.03	159,164	277	50	1.70	3.4	4.4	4,110.84	93,623	80	98	4.28	4.4	5,679.92	6	363	165.34	42	363	
Park Hill—																				
1920	1,530.39	29,648	120	17	1.74	10.3	10+52	1,106.09	17,506	58	24	3.22	12.8	110.15	1	179	10	40	179	
1921	3,049.70	36,461	146	20	1.92	9.4	11.1	2,243.54	16,919	58	23	2.74	11.1	1,186.35	3	207	29.40	91	207	
1922	3,443.03	36,461	152	20	1.92	9.4	11.1	1,974.60	16,919	63	23	2.74	11.1	1,157.39	4	219	41.28	23	219	
Paris—																				
1914	4,766.23	65,037	354	17	1.01	5.8	7+10	2,778.09	65,108	142	57	2.32	4.3	4.3	8+20	1,419.90	1	497	497	
1915	5,071.54	87,239	477	17	1.01	5.8	4.1	4,063.03	100,259	150	57	2.32	4.1	6,328.33	4	631	6.328	33	631	
1916	5,877.57	127,382	552	21	96	4.6	3.9	3,805.95	96,750	150	53	2.11	3.9	8,974.66	4	706	8.974	66	706	
1917	6,620.91	155,986	581	23	98	4.2	4.0	4,303.71	105,150	161	56	2.31	4.0	8,828.42	5	747	416.21	22	747	
1918	7,839.11	155,406	625	21	1.08	5.0	4.9	4,339.77	86,904	162	44	2.23	4.9	12,951.24	8	795	556.23	29	795	
1919	7,447.39	237,276	663	30	94	3.1	4.9	4,436.78	90,539	168	45	2.20	4.9	14,226.43	12	843	579.24	57	843	
1920	7,696.27	237,103	757	26	85	3.2	2.6	4,411.23	90,539	182	77	2.02	2.6	16,414.88	13	952	805.20	39	952	
1921	9,368.93	366,497	875	35	90	2.5	2.2	4,532.48	173,264	188	77	2.01	2.6	16,844.82	18	1,081	930.18	11	1,081	
1922	11,791.12	518,536	884	49	1.12	2.3	2.2	4,670.02	184,961	170	100	2.24	2.2	15,743.55	17	1,071	739.21	30	1,071	

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Year	Domestic light						Commercial light						Power						
		Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Number of consumers	Average horsepower	Average cost per horsepower \$ c.	Total number of consumers
Plattsville—																				
	1915	551.39	6,061	56	.....	.....	9.1	None	477.71	5,091	20	.....	.....	9.4	None	1,128.27	4	.....	.....	80
	1916	666.30	7,422	60	11	96	9.0	.....	580.62	5,900	22	14	1.35	9.8	.....	1,436.62	3	.....	.....	85
	1917	670.35	7,220	60	10	93	9.3	.....	583.58	6,714	22	25	2.21	8.7	.....	768.37	2	37	20.77	84
	1918	699.99	9,011	60	11	97	8.7	.....	636.88	8,489	23	31	2.35	7.5	.....	1,596.81	2	60	26.60	85
	1919	795.79	8,967	62	12	1.07	8.9	.....	826.27	15,051	27	46	2.40	5.2	.....	3,053.72	2	65	46.98	91
	1920	969.31	11,294	65	14	1.24	8.6	.....	873.81	14,655	26	47	2.80	6.0	.....	3,155.32	3	92	34.30	94
	1921	1,066.62	14,362	77	15	1.15	7.4	.....	706.15	10,570	20	44	2.94	6.7	.....	302.26	2	15	20.15	99
	1922	1,283.04	17,448	75	19	1.41	7.3	.....	790.79	16,773	28	58	2.75	4.7	.....	222.29	2	15	14.82	105
Port Arthur—																				
	1913	81,830.66	.....	2,409	.....	.....	.....	8+25	*	.....	500	.....	.....	.....	8+25	51,748.11	55	.....	.....	2,464
	1914	38,097.65	.....	2,969	.....	.....	.....	.....	32,933.91	.....	550	.....	.....	.....	.....	92,804.49	55	.....	.....	3,574
	1915	32,048.37	.....	2,800	.....	.....	.....	.....	28,662.58	.....	550	.....	.....	.....	.....	85,060.78	50	.....	.....	3,900
	1916	31,152.52	.....	2,701	.....	.....	.....	.....	27,439.63	.....	481	.....	.....	.....	.....	96,913.51	46	.....	.....	3,228
	1917	33,358.31	.....	2,783	.....	.....	.....	.....	28,235.05	.....	503	.....	.....	.....	.....	111,367.47	42	5,093	21.88	3,328
	1918	37,216.29	1,157,382	2,807	34	1.11	3.2	.....	31,612.57	919,826	535	147	5.07	3.4	.....	142,118.26	42	6,967	20.39	3,384
	1919	41,584.37	1,342,696	2,633	43	1.32	3.1	.....	33,390.02	978,503	625	131	4.45	3.4	.....	168,517.53	58	8,420	20.01	3,316
	1920	45,432.34	1,641,294	2,960	45	1.28	2.8	.....	32,165.55	1,078,290	590	152	4.54	3.0	.....	178,529.32	59	8,983	19.57	3,609
	1921	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	1922	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Port Colborne—																				
	1920	4,301.69	101,020	465	25	1.00	4.2	10	3,082.14	89,448	132	80	2.25	3.5	4	2,718.09	13	140	19.45	610
	1921	8,220.47	164,365	579	24	1.18	5.0	.....	5,125.80	140,397	151	79	2.83	3.6	.....	4,381.18	17	181	24.20	747
	1922	9,496.22	246,059	608	34	1.33	3.9	.....	4,990.40	159,052	155	87	2.72	3.1	.....	7,602.88	13	275	27.65	776

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Year	Domestic light						Commercial light						Power						
		Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Number of consumers	Average horsepower	Average cost per horsepower \$ c.	Total number of consumers
Port Stanley—																				
	1912	897.02		122				Flat	1,106.63		40				Flat	1,314.70	3			165
	1913	1,828.06		182					1,771.70		60					2,418.00	9			251
	1914	2,066.41		229					1,753.60		72					2,170.83	12			313
	1915	2,498.57		274					1,736.42		73					2,064.76	9			356
	1916	2,956.97		308					1,551.37		72					1,985.92	11			391
	1917	3,386.56		323					1,714.56		57					3,174.23	6			396
	1918	3,736.63	59,736	140	21	1.34	6.2		1,734.62	21,927	67	27	2.15	7.9		2,738.60	16	80	34.23	223
	1919	4,433.44		388		95			1,973.57		75		2.20			2,996.19	17	77	38.91	480
	1920	5,003.83		439		95			1,696.00	38,808	89	36	1.59	4.4		5,324.27	20	161	33.07	548
	1921	6,558.51	367,909	481	64	1.14			1,608.99	72,080	111	54	1.21			5,344.03	19	174	30.71	611
	1922	7,306.84		508					1,881.49		67					5,720.55	12	190	30.11	587
Prescott—																				
	1914	4,868.75		342	16	95	6.0	9	3,600.00		122				9	1,099.27	10			474
	1915	4,058.14	67,130	369	15	93	6.6		3,033.62	62,647	145	39	1.89	4.8		3,431.45	11			525
	1916	4,186.96	63,304	380	15	93	6.6		3,611.95	71,794	133	43	2.16	5.0		4,141.90	22			525
	1917	4,865.40	79,202	381	17	1.06	6.1		3,999.55	88,386	134	55	2.49	4.5		5,010.65	14	232	21.60	529
	1918	4,783.96	79,573	414	16	1.00	6.0		3,663.18	87,224	134	54	2.27	4.2		5,595.29	14	257	21.77	562
	1919	5,354.77	96,876	524	19	1.05	5.5		3,556.77	69,093	126	46	2.35	5.1		4,946.97	18	243	20.36	568
	1920	5,952.58	113,850	456	21	1.09	5.2		4,043.40	81,938	136	50	2.48	4.9		5,206.91	21	257	20.26	613
	1921	7,851.66	122,369	466	22	1.40	6.4		4,730.49	89,896	133	56	2.96	5.3		5,721.94	18	270	22.19	617
	1922	8,954.07	152,011	470	27	1.59	5.9		5,196.38	103,430	136	64	3.23	5.0		6,481.29	21	336	19.28	627

Preston—	1912	4,234.68	...	341	5,237.99	131</
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STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Domestic light						Commercial light						Power						
	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers
	\$ c.	kw-hrs.		kw-hr	\$ c.	cents	cents	* \$ c.	kw-hrs.		kw-hr	\$ c.	cents	cents	\$	c.		\$	
Rockwood—																			
1913	230.27	7,824	48	13	1.38	8.8	None	*	251.27	3,300	9	32	2.46	8.8	470.82	1			58
1914	848.55	7,824	54	13	1.03	7.7	None	*	388.05	5,930	7	32	2.46	7.7	1,542.01	3			64
1915	731.97	9,500	65	13	1.03	7.7			380.90	6,061	10	32	2.46	7.7	907.57	3			78
1916	733.66	11,263	72	14	89	6.5			372.56	5,812	11	47	3.08	6.4	903.57	5			87
1917	795.54	12,740	77	14	90	6.2			384.46	6,571	15	39	2.44	6.3	1,097.05	3			95
1918	860.14	13,242	79	14	91	6.4			480.73	6,116	14	33	2.14	6.4	1,087.21	4			97
1919	1,023.14	17,602	93	16	92	5.8			584.02	7,607	17	32	1.90	5.9	1,177.94	4			114
1920	1,382.39	22,935	94	20	1.23	6.2			550.71	7,597	18	28	1.89	6.7	1,310.28	4			116
1921	1,799.39	27,899	112	21	1.34	6.4					16	40	3.04	7.7	2,056.68	4			132
1922	1,939.72	35,916	118	26	1.41	5.4					17	40	2.85	7.2	1,434.38	4			139
Rodney—																			
1917	587.46		57				None	665.84		41									98
1918	794.65	6,522	63	9	1.10	12.0		911.63	7,916	44	15	1.78	11.5						107
1919	1,050.66	10,423	78	11	1.12	10.1		1,224.65	9,712	46	18	2.04	11.4		1,657.98	2			126
1920	1,516.38	15,389	104	12	1.21	9.9		1,373.38	12,641	53	20	2.16	10.9		1,506.77	2			159
1921	1,849.15	20,809	120	14	1.28	8.9		1,548.45	14,445	56	21	2.30	10.7		1,427.43	2			178
1922	1,897.70	26,252	131	17	1.26	7.3		1,362.47	18,950	60	26	1.89	7.2		1,343.34	4			195
St. Catharines—																			
1914	2,013.48	53,572	833			3.7	7	412.75	22,843	92			1.9		12,742.98	20			945
1915	9,540.70	273,389	1,612	19	65	3.5		3,810.11	196,056	192	115	2.23	1.9		25,193.30	34			1,838
1916	16,419.57	591,765	2,410	24	68	2.8		5,925.49	318,877	247	121	2.25	1.5		40,688.67	48			2,705
1917	24,275.56	1,038,894	3,823	31	77	2.3		6,024.34	392,524	270	127	1.99	1.5		71,138.36	52			3,155
1918	30,187.05	1,448,273	3,022	40	84	2.0		6,028.41	374,447	279	113	1.83	1.6		94,632.33	53			3,454
1919	36,710.19	1,815,947	3,428	44	89	2.0		7,401.09	489,325	299	136	2.06	1.5		48,616.67	52			3,719
1920	46,123.30	2,899,265	3,703	65	1.04	1.6		8,930.44	627,664	338	155	2.20	1.4		60,203.07	69			4,110
1921	55,560.41	3,932,393	4,040	81	1.15	1.4		10,321.67	685,855	360	159	2.39	1.5		54,947.24	84			4,484
1922	59,603.93	4,565,984	4,341	88	1.15	1.3		11,409.66	824,900	398	173	2.39	1.4		66,583.84	93			4,832

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Year	Domestic light						Commercial light						Power						
		Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers
Sarnia—	1917	25,655.32	385,770	2,150	15	99	6.6	6	18,724.77	405,824	439	75	3.55	4.4	5—4	33,693.36	58	1,014	33.23	2,647
	1918	28,772.83	549,370	2,380	20	1.05	5.2		19,935.11	494,635	445	93	3.75	4.0		35,272.45	62	1,110	31.78	2,887
	1919	33,920.44	720,871	2,681	22	1.05	4.7		22,668.63	534,075	492	91	3.84	4.2		68,714.03	70	2,065	33.28	3,243
	1920	44,174.44	1,028,520	2,918	29	1.26	4.3		28,041.43	566,212	477	98	4.90	5.0		100,632.53	65	2,687	37.45	3,460
	1921	51,857.64	1,473,021	3,591	34	1.20	3.5		29,269.89	841,088	546	127	4.47	3.5		90,166.93	79	2,816	22.02	4,216
	1922	57,975.10	1,903,231	3,928	42	1.29	3.0		24,663.65	949,077	565	143	3.54	2.5		92,054.18	86	2,950	31.20	4,579
Scarboro Twp.—	1919	.....	58,961	428	12	.....	.....	None	.....	4,054	9	30	.....	.....	.....	.....	1	.....	.....	438
	1920	.....	144,202	652	18	.....	.....	.....	*	3,374	8	35	.....	.....	.....	3,083.31	3	59	52.26	663
	1921	13,932.01	305,779	947	27	1.23	4.5		943.89	18,096	15	100	5.24	5.2		3,920.18	8	119	32.94	960
	1922	20,438.77	293,567	1,363	.....	.....	.....		83.13	11,845	58	.....	.....	.....		10,281.79	12	175	58.75	1,433
	1923	2,124.18	24,665	178	.....	.....	8.6	8+25	2,876.47	34,789	105	.....	.....	8.3		7,509.99	10	.....	.....	293
Seaforth—	1914	2,467.36	37,453	211	16	1.06	6.8		2,581.30	45,492	112	35	1.98	5.6		7,707.01	10	.....	.....	333
	1915	2,593.70	43,162	238	16	96	6.0		2,724.84	48,840	111	37	2.03	5.6		7,685.52	11	.....	.....	360
	1916	3,045.65	51,884	280	17	97	5.9		2,941.03	56,380	110	43	2.22	5.2		9,684.11	12	.....	.....	402
	1917	3,437.49	59,870	298	17	96	5.8		2,902.34	49,593	112	37	2.16	5.7		15,125.30	13	401	37.72	423
	1918	3,675.33	65,761	311	18	99	5.6		2,874.71	50,140	108	38	2.17	5.7		21,124.99	12	573	36.86	431
	1919	4,209.20	80,479	326	21	1.08	5.2		3,460.97	62,055	119	43	2.42	5.6		12,054.95	13	469	25.70	455
	1920	4,606.78	94,972	400	20	96	4.8		3,764.88	79,380	117	56	2.68	4.8		9,860.95	13	360	27.39	530
	1921	5,870.40	138,859	447	26	1.09	4.2		3,610.84	89,515	124	60	2.43	4.0		9,993.15	13	407	24.55	584
	1922	6,631.66	182,565	479	32	1.19	3.7		3,567.85	91,694	116	64	2.48	3.9		8,829.97	11	354	24.94	606

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Year	Domestic light						Commercial light						Power						
		Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Number of consumers	Average horsepower per horsepower	Average cost per horsepower \$ c.	Total number of consumers
Stratford—																				
	1912	6,942.56	.....	640	.....	90	.....	12+25	14,661.16	.....	316	.....	3.86	.....	12+25	8,834.40	76	.....	.....	1,032
	1913	11,550.71	.....	1,042	.....	1.02	.....	.....	17,072.61	.....	367	.....	4.15	.....	.....	14,272.59	92	.....	.....	1,501
	1914	15,180.91	.....	269,459	.....	1.03	.....	.....	16,336.30	.....	396	.....	3.55	.....	.....	16,519.24	99	.....	.....	1,898
	1915	16,967.58	.....	388,200	.....	21	.....	.....	14,766.75	.....	439	.....	2.92	.....	.....	15,415.78	104	.....	.....	2,267
	1916	20,108.76	.....	553,441	.....	90	.....	.....	14,803.08	.....	463	.....	2.75	.....	.....	23,506.12	103	.....	.....	2,559
	1917	26,614.85	.....	831,496	.....	31	.....	.....	16,385.81	.....	388	.....	3.21	.....	.....	27,846.16	112	.....	.....	2,992
	1918	29,314.17	.....	1,047,437	.....	34	.....	.....	15,261.26	.....	399	.....	3.23	.....	.....	27,845.41	118	.....	.....	3,143
	1919	35,342.84	.....	1,380,776	.....	40	.....	.....	17,330.26	.....	408	.....	4.53	.....	.....	26,420.07	124	.....	.....	3,430
	1920	41,679.50	.....	1,956,442	.....	51	.....	.....	19,050.82	.....	423	.....	3.75	.....	.....	34,923.07	137	.....	.....	3,753
	1921	50,918.45	.....	2,646,048	.....	63	.....	.....	19,459.85	.....	455	.....	3.56	.....	.....	33,036.65	146	.....	.....	4,015
	1922	64,796.40	.....	3,768,062	.....	89	.....	.....	21,947.00	.....	477	.....	3.96	.....	.....	32,619.11	157	.....	.....	4,286
Strathroy—																				
	1915	3,380.78	.....	36,200	.....	.....	.....	9.3	4,701.76	.....	147	.....	.....	.....	12+25	700.49	5	.....	.....	385
	1916	3,318.45	.....	51,197	.....	16	.....	6.5	3,817.38	.....	152	.....	2.12	.....	.....	2,927.36	8	.....	.....	474
	1917	4,355.25	.....	71,509	.....	17	.....	6.1	3,554.88	.....	153	.....	1.94	.....	.....	4,138.79	11	.....	.....	539
	1918	4,926.25	.....	106,921	.....	23	.....	4.6	3,588.67	.....	142	.....	2.02	.....	.....	7,447.74	12	.....	.....	535
	1919	5,589.48	.....	112,946	.....	23	.....	4.9	4,228.41	.....	147	.....	2.40	.....	.....	7,064.29	13	.....	.....	577
	1920	6,891.04	.....	155,682	.....	27	.....	4.4	5,037.74	.....	159	.....	2.64	.....	.....	11,192.48	22	.....	.....	660
	1921	7,927.50	.....	205,236	.....	32	.....	3.9	5,436.85	.....	165	.....	2.75	.....	.....	13,145.24	23	.....	.....	725
	1922	9,019.42	.....	259,236	.....	37	.....	3.5	5,685.75	.....	164	.....	2.88	.....	.....	12,936.06	23	.....	.....	804

Sunderland—		Tara—		Tavistock—		Tecumseh—		Teeswater—		Thamesford—	
1915	794.83	1918	428.50	1917	1,155.03	1922	1,325.94	1922	2,695.66	1914	393.49
1916	752.64	1919	601.28	1918	1,258.12	1917	1,325.94	1915	374.34	1915	374.34
1917	858.64	1920	1,093.36	1919	1,442.02	1918	1,258.12	1916	642.21	1916	642.21
1918	988.01	1921	1,824.49	1920	1,806.64	1919	1,442.02	1917	646.83	1917	646.83
1919	1,123.51	1922	2,226.18	1921	2,184.08	1920	1,806.64	1918	652.58	1918	652.58
1920	1,580.01			1922	3,131.34	1921	2,184.08	1919	820.10	1919	820.10
1921	1,851.55					1922	3,131.34	1920	1,030.02	1920	1,030.02
1922	1,858.95							1921	1,127.26	1921	1,127.26
								1922	1,274.53	1922	1,274.53
57	11	45	14	80	114	279	127	44	59	44	59
1.06	9.8	85	85	92	9.6	1.77	6.9	78	8.6	78	8.6
1.29	8.3	1.85	6.1	98	6.6	1.77	6.9	87	8.5	87	8.5
1.33	8.4	1.28	6.7	105	5.7	1.77	6.9	86	9.3	86	9.3
1.32	8.0	2.54	7.9	191	1.08	1.77	6.9	81	8.5	81	8.5
1.66	9.1	1.12	9.1	27	1.17	1.77	6.9	11	1.12	11	1.12
1.95	11.4	1.21	9.4	39	1.47	1.77	6.9	13	1.21	13	1.21
1.94	11.4	1.17	8.6	109	3.7	1.77	6.9	14	1.17	14	1.17
		1.22	7.6	114	10	1.77	6.9	15	1.22	15	1.22
				126	10	1.77	6.9	16	1.22	16	1.22
				136	10	1.77	6.9	17	1.22	17	1.22
				146	10	1.77	6.9	18	1.22	18	1.22
				156	10	1.77	6.9	19	1.22	19	1.22
				166	10	1.77	6.9	20	1.22	20	1.22
				176	10	1.77	6.9	21	1.22	21	1.22
				186	10	1.77	6.9	22	1.22	22	1.22
				196	10	1.77	6.9	23	1.22	23	1.22
				206	10	1.77	6.9	24	1.22	24	1.22
				216	10	1.77	6.9	25	1.22	25	1.22
				226	10	1.77	6.9	26	1.22	26	1.22
				236	10	1.77	6.9	27	1.22	27	1.22
				246	10	1.77	6.9	28	1.22	28	1.22
				256	10	1.77	6.9	29	1.22	29	1.22
				266	10	1.77	6.9	30	1.22	30	1.22
				276	10	1.77	6.9	31	1.22	31	1.22
				286	10	1.77	6.9	32	1.22	32	1.22
				296	10	1.77	6.9	33	1.22	33	1.22
				306	10	1.77	6.9	34	1.22	34	1.22
				316	10	1.77	6.9	35	1.22	35	1.22
				326	10	1.77	6.9	36	1.22	36	1.22
				336	10	1.77	6.9	37	1.22	37	1.22
				346	10	1.77	6.9	38	1.22	38	1.22
				356	10	1.77	6.9	39	1.22	39	1.22
				366	10	1.77	6.9	40	1.22	40	1.22
				376	10	1.77	6.9	41	1.22	41	1.22
				386	10	1.77	6.9	42	1.22	42	1.22
				396	10	1.77	6.9	43	1.22	43	1.22
				406	10	1.77	6.9	44	1.22	44	1.22
				416	10	1.77	6.9	45	1.22	45	1.22
				426	10	1.77	6.9	46	1.22	46	1.22
				436	10	1.77	6.9	47	1.22	47	1.22
				446	10	1.77	6.9	48	1.22	48	1.22
				456	10	1.77	6.9	49	1.22	49	1.22
				466	10	1.77	6.9	50	1.22	50	1.22
				476	10	1.77	6.9	51	1.22	51	1.22
				486	10	1.77	6.9	52	1.22	52	1.22
				496	10	1.77	6.9	53	1.22	53	1.22
				506	10	1.77	6.9	54	1.22	54	1.22
				516	10	1.77	6.9	55	1.22	55	1.22
				526	10	1.77	6.9	56	1.22	56	1.22
				536	10	1.77	6.9	57	1.22	57	1.22
				546	10	1.77	6.9	58	1.22	58	1.22
				556	10	1.77	6.9	59	1.22	59	1.22
				566	10	1.77	6.9	60	1.22	60	1.22
				576	10	1.77	6.9	61	1.22	61	1.22
				586	10	1.77	6.9	62	1.22	62	1.22
				596	10	1.77	6.9	63	1.22	63	1.22
				606	10	1.77	6.9	64	1.22	64	1.22
				616	10	1.77	6.9	65	1.22	65	1.22
				626	10	1.77	6.9	66	1.22	66	1.22
				636	10	1.77	6.9	67	1.22	67	1.22
				646	10	1.77	6.9	68	1.22	68	1.22
				656	10	1.77	6.9	69	1.22	69	1.22
				666	10	1.77	6.9	70	1.22	70	1.22
				676	10	1.77	6.9	71	1.22	71	1.22
				686	10	1.77	6.9	72	1.22	72	1.22
				696	10	1.77	6.9	73	1.22	73	1.22
				706	10	1.77	6.9	74	1.22	74	1.22
				716	10	1.77	6.9	75	1.22	75	1.22
				726	10	1.77	6.9	76	1.22	76	1.22
				736	10	1.77	6.9	77	1.22	77	1.22
				746	10	1.77	6.9	78	1.22	78	1.22
				756	10	1.77	6.9	79	1.22	79	1.22
				766	10	1.77	6.9	80	1.22	80	1.22
				776	10	1.77	6.9	81	1.22	81	1.22
				786	10	1.77	6.9	82	1.22	82	1.22
				796	10	1.77	6.9	83	1.22	83	1.22
				806	10	1.77	6.9	84	1.22	84	1.22
				816	10	1.77	6.9	85	1.22	85	1.22
				826	10	1.77	6.9	86	1.22	86	1.22
				836	10	1.77	6.9	87	1.22	87	1.22
				846	10	1.77	6.9	88	1.22	88	1.22
				856	10	1.77	6.9	89	1.22	89	1.22
				866	10	1.77	6.9	90	1.22	90	1.22
				876	10	1.77	6.9	91	1.22	91	1.22
				886	10	1.77	6.9	92	1.22	92	1.22
				896	10	1.77	6.9	93	1.22	93	1.22
				906	10	1.77	6.9	94	1.22	94	1.22
				916	10	1.77	6.9	95	1.22	95	1.22
				926	10	1.77	6.9	96	1.22	96	1.22
				936	10	1.77	6.9	97	1.22	97	1.22
				946	10	1.77	6.9	98	1.22	98	1.22
				956	10	1.77	6.9	99	1.22	99	1.22
				966	10	1.77	6.9	100	1.22	100	1.22
				976	10	1.77	6.9	101	1.22	101	1.22
				986	10	1.77	6.9	102	1.22	102	1.22
				996	10	1.77	6.9	103	1.22	103	1.22
				1006	10	1.77	6.9	104	1.22	104	1.22
				1016	10	1.77	6.9	105	1.22	105	1.22
				1026	10	1.77	6.9	106	1.22	106	1.22
				1036	10	1.77	6.9	107	1.22	107	1.22
				1046	10	1.77	6.9	108	1.22	108	1.22
				1056	10	1.77	6.9	109	1.22	109	1.22
				1066	10	1.77	6.9	110	1.22	110	1.22
				1076	10	1.77	6.9	111	1.22	111	1.22
				1086	10	1.77	6.9	112	1.22	112	1.22
				1096	10	1.77	6.9	113	1.22	113	1.22
				1106	10	1.77	6.9	114	1.22	114	1.22
				1116	10	1.77	6.9	115	1.22	115	1.22
				1126	10	1.77	6.9	116	1.22	116	1.22
				1136	10	1.77	6.9	117	1.22	117	1.22
				1146	10	1.77	6.9	118	1.22	118	1.22
				1156	10	1.77	6.9	119	1.22	119	1.22
				1166	10	1.77	6.9	120	1.22	120	1.22
				1176	10	1.77	6.9	121	1.22	121	1.22
				1186	10	1.77	6.9	122	1.22	122	1.22
				1196	10	1.77	6.9	123	1.22	123	1.22
				1206	10	1.77	6.9	124	1.22	124	1.22
				1216	10	1.77	6.9	125	1.22	125	1.22
				1226	10	1.77	6.9	126	1.22	126	1.22
				1236	10	1.77	6.9	127	1.22	127	1.22
				1246	10	1.77	6.9	128	1.22	128	1.22
				1256	10	1.77	6.9	129	1.22	129	1.22
				1266	10	1.77	6.9	130	1.22	130	1.22
				1276	10	1.77	6.9	131	1.22	131	1.22
				1286	10	1.77	6.9	132	1.22	132	1.22
				1296	10	1.77	6.9	133	1.22	133	1.22
				1306	10	1.77	6.9	134	1.22	134	1.22
				1316	10	1.77	6.9	135	1.22	135	1.22
				1326	10	1.77	6.9	136	1.22	136	1.22
				1336	10	1.77	6.9	137	1.22	137	1.22

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Year	Domestic light						Commercial light						Power				Total number of consumers		
		Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Number of consumers		Average horsepower	Average cost per horsepower \$ c.
Thamesville—																				
	1915	378.79	.....	107	13	1.18	9.1	9	283.36	.....	53	20	1.52	7.8	11	.....	.....	.....	.....	160
	1916	1,729.79	19,061	137	13	1.08	8.6	.....	1,021.17	13,087	59	20	1.52	7.8	.....	.....	.....	.....	.....	196
	1917	1,829.34	21,168	145	13	1.08	8.6	.....	949.80	9,697	70	12	1.22	9.8	.....	.....	.....	.....	.....	215
	1918	1,781.98	23,819	149	13	1.00	7.5	.....	909.52	11,131	63	15	1.20	8.2	.....	.....	.....	.....	.....	213
	1919	1,672.09	26,913	149	15	94	6.2	.....	1,242.00	16,158	69	19	1.50	7.7	.....	.....	.....	.....	.....	218
	1920	2,293.54	31,757	168	16	1.14	7.2	.....	1,783.72	16,581	67	21	2.22	10.8	.....	.....	.....	.....	.....	237
	1921	2,907.81	36,542	183	17	1.32	8.0	.....	2,578.52	24,263	66	31	3.26	10.6	.....	.....	.....	.....	.....	253
	1922	3,030.28	41,882	181	19	1.39	7.2	.....	2,179.75	28,244	72	34	2.63	7.7	.....	.....	.....	.....	.....	258
Thedford—																				
	1922	1,027.74	.....	100	.....	.....	.....	.....	686.87	.....	33	.....	.....	.....	.....	.....	365.28	1	.....	134
Thornedale—																				
	1914	446.27	2,787	34	7	76	10.6	None	.....	2,989	18	16	1.64	7.8	None	.....	329.27	1	.....	53
	1915	299.37	2,816	32	9	84	9.1	.....	374.09	3,653	20	16	1.64	10.2	.....	.....	542.53	1	.....	53
	1916	328.67	3,597	33	11	91	8.2	.....	403.01	3,709	21	16	1.64	10.9	.....	.....	459.79	1	.....	55
	1917	382.95	4,654	37	11	91	8.2	.....	413.03	4,642	22	17	1.56	8.9	.....	.....	475.53	1	.....	60
	1918	434.89	5,754	41	12	92	7.5	.....	404.27	5,302	23	19	1.49	7.6	.....	.....	2,114.60	2	.....	66
	1919	539.94	9,211	43	12	1.05	8.7	.....	560.55	6,015	27	19	1.73	9.3	.....	.....	2,337.09	2	.....	72
	1920	716.05	7,115	46	13	1.30	10.0	.....	715.49	9,269	27	29	2.21	7.7	.....	.....	3,455.34	2	.....	75
	1921	989.21	10,666	62	16	1.33	9.3	.....	743.97	8,748	17	43	3.65	8.5	.....	.....	2,102.43	2	.....	81
	1922	1,056.69	11,787	55	17	1.52	8.8	.....	668.49	8,098	25	32	2.65	8.3	.....	.....	1,838.18	1	.....	81
Thornton—																				
	1919	390.38	.....	31	.....	.....	.....	None	158.36	.....	10	.....	.....	.....	None	.....	.....	.....	.....	41
	1920	564.08	.....	33	.....	.....	.....	.....	198.24	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	43
	1921	688.24	6,683	34	16	1.69	10.3	.....	306.20	3,250	11	24	2.32	9.4	.....	.....	.....	.....	.....	55
	1922	786.81	7,816	38	18	1.82	10.1	.....	330.93	2,431	10	20	2.75	13.2	.....	.....	.....	.....	.....	48

Thorold— 1922	12,100.76	558,497	985	47	1.02	2.2	4,986.80	234,313	172	113	2.41	2.1	2,590.78	5	89	29.51	1,162
Tilbury—																	
1915	979.57	.....	123	.....	.....	.....	1,476.53	.....	67	.....	.....	.....	.....	.....	.....	.....	190
1916	1,507.37	21,483	127	14	1.00	6.5	2,071.77	32,612	79	37	2.36	4.5	149.60	2	.....	.....	218
1917	1,555.59	20,600	132	13	1.00	7.6	2,038.56	27,335	80	29	2.12	7.5	423.28	5	22	19.24	217
1918	1,652.71	23,964	135	15	1.02	6.9	1,834.59	26,534	75	29	2.04	6.8	1,402.53	4	56	25.15	214
1919	1,918.60	30,305	143	18	1.12	6.3	2,279.49	34,939	91	32	2.09	6.5	1,889.69	5	77	24.54	239
1920	2,372.09	35,314	144	20	1.37	6.7	2,648.21	44,668	91	41	2.43	5.9	1,711.87	6	85	20.14	241
1921	3,279.86	50,279	193	22	1.42	6.5	3,457.17	54,960	89	51	3.24	6.3	4,745.94	8	168	28.25	290
1922	4,201.29	67,899	220	25	1.69	6.2	4,265.94	67,317	88	63	4.04	6.3	6,640.84	10	256	25.90	318
Tillsonburg—																	
1912	3,233.92	.....	200	.....	.....	.....	3,350.91	.....	128	.....	.....	.....	3,283.75	6	.....	.....	334
1913	2,796.57	29,115	254	10	1.03	9.6	4,677.38	66,049	143	41	2.87	7.8	4,763.15	17	.....	.....	414
1914	3,367.74	45,937	300	14	1.02	7.3	4,579.37	70,265	160	38	2.52	6.5	6,303.09	16	.....	.....	476
1915	3,203.51	55,346	348	14	83	5.7	4,236.42	74,564	161	38	2.19	5.7	5,619.15	15	.....	.....	524
1916	4,009.67	72,975	375	18	1.02	5.5	4,493.41	95,326	188	46	2.14	4.7	5,692.05	17	.....	.....	580
1917	5,237.69	97,606	400	21	1.13	5.4	4,758.14	96,044	165	45	2.25	5.0	7,935.07	20	451	17.59	585
1918	4,534.89	77,751	407	16	93	5.8	5,377.01	104,830	166	53	2.70	5.1	16,717.31	22	532	31.42	595
1919	4,971.07	110,613	441	21	94	4.5	5,573.12	136,175	178	64	2.61	4.1	23,917.76	22	781	30.63	641
1920	6,417.45	159,319	480	28	1.16	4.0	6,077.79	151,422	178	71	2.84	4.0	18,378.45	19	753	24.41	677
1921	7,160.17	178,122	527	28	1.13	4.0	6,679.06	174,255	189	77	2.94	3.8	10,084.24	19	536	18.81	735
1922	7,980.94	213,716	566	32	1.22	3.7	7,177.19	163,421	196	71	4.11	4.4	9,916.25	22	514	19.29	784
Toronto—																	
1912	201,554.74	.....	11,441	.....	.....	.....	*	.....	*	.....	.....	.....	225,451.55	518	.....	.....	11,959
1913	190,376.89	4,220,270	16,519	25	1.25	4.4	233,799.04	6,156,073	4,764	.....	4.09	3.8	347,708.88	1,037	.....	.....	22,320
1914	289,645.45	6,240,882	23,181	27	1.22	4.5	305,534.31	7,083,589	6,276	116	4.61	3.9	483,681.15	1,494	.....	.....	30,951
1915	331,807.18	8,599,559	29,724	27	1.04	3.9	291,907.92	10,243,496	7,227	126	3.60	2.8	575,239.17	1,504	.....	.....	38,455
1916	225,181.19	11,250,291	34,347	29	89	3.1	272,243.06	11,491,577	7,406	131	3.10	2.4	612,918.32	1,707	.....	.....	43,460
1917	414,043.17	15,341,150	41,358	34	91	2.7	297,459.72	12,763,343	9,341	126	2.96	2.2	734,294.61	2,028	36,856	19.92	52,727
1918	451,824.59	18,068,947	42,558	36	89	2.5	294,653.18	13,025,770	9,113	117	2.66	2.2	907,886.95	2,034	46,159	19.66	53,705
1919	560,912.00	22,799,666	51,242	37	91	2.5	382,167.17	17,197,460	10,510	136	3.03	2.2	1,144,453.76	2,225	52,200	21.93	63,977
1920	729,364.33	33,567,358	57,685	51	1.11	2.2	507,285.14	22,452,782	11,307	171	3.87	2.2	1,158,639.12	2,390	57,000	20.33	71,382
1921	865,908.45	38,662,078	67,019	48	1.08	2.2	699,144.27	24,954,872	12,401	168	4.70	2.8	1,236,518.60	2,488	58,880	21.00	81,908
1922	1,073,539.05	51,689,146	76,985	59	1.24	2.1	852,286.95	30,402,527	13,684	198	5.55	2.7	1,368,884.30	2,659	60,615	22.58	93,328
Toronto Twp.—																	
1918	13,180.75	.....	280	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	280
1919	14,566.15	.....	258	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	258
1920	18,641.08	.....	398	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	410
1921	25,042.87	.....	573	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	585
1922	27,068.08	435,808	798	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	809

STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Year	Domestic light						Commercial light						Power						
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers
Waterloo—																				
	1912	4,057.46	69,576	239	21	1.27	6.1	12+25	4,524.93	87,718	112	62	3.58	5.8	12+25	11,545.93	35			386
	1913	4,263.66	85,199	321	21	1.05	5.5		5,098.42	98,924	125	62	2.90	5.0		14,970.14	44			490
	1914	4,723.94	106,570	524	19	1.05	5.1		4,825.22	107,821	153	59	2.90	5.0		13,282.14	51			634
	1915	5,401.82	145,196	592	22	81	3.8		5,284.87	130,418	162	57	2.80	4.9		15,125.32	53			739
	1916	5,454.60	195,770	694	25	85	3.4		4,750.09	144,543	150	69	2.54	3.6		17,905.45	50			792
	1917	6,562.98	232,962	735	26	81	3.1		5,097.38	144,543	155	55	2.70	3.5		18,773.17	59	1,017	18.46	908
	1918	7,157.81	305,803	830	31	88	2.9		4,738.43	132,621	155	71	2.55	3.6		20,613.60	50	1,186	17.38	940
	1919	8,771.46	512,612	995	47	1.09	2.3		5,347.03	176,953	161	92	2.78	3.0		23,399.07	66	1,274	18.37	1,057
	1920	11,943.47	653,123	1,091	50	1.14	2.3		5,488.04	234,843	169	118	2.77	2.3		27,011.12	68	1,451	18.60	1,232
	1921	14,931.02	990,570	1,200	72	1.40	1.9		7,125.48	298,664	172	145	3.45	2.4		26,882.41	68	1,455	18.47	1,331
	1922	19,267.15							8,090.25	335,694	178	160	3.80	2.4		33,108.68	52	1,507	21.97	1,430
Watford—																				
	1918	1,544.91	20,173	108	16	1.20	7.6	Flat	1,324.56	18,173	70	21	1.57	7.2	10+25	1,542.04	4	64	24.09	182
	1919	1,905.65	23,042	118	16	1.34	8.3		1,779.86	16,293	60	23	2.47	10.9		2,154.95	5	63	34.20	183
	1920	2,332.72	26,686	136	18	1.53			2,160.32	20,679	70	27	2.76	10.5		2,305.80	7	80	29.00	213
	1921	2,873.44	30,714	154	17	1.55	9.3		2,620.52	29,233	76	32	2.87	9.0		2,808.30	8	85	33.04	238
	1922	3,118.16	36,865	201	18	1.47	8.5		2,880.90	30,769	76	34	3.16	9.4		3,227.88	9	97	33.27	286
Waubashene—																				
	1915	516.34	7,296	49			7.0	None	220.50	2,979	15					32.28	1			65
	1916	646.58	8,233	58	13	1.01	7.9		496.47	7,534	20	36	2.37	6.6		49.52	1			79
	1917	691.56	8,602	64	11	94	8.0		455.62	8,588	17	40	2.23	5.3		36.85	1	3		82
	1918	702.19	10,124	64	13	91	6.9		494.76	10,988	16	57	2.58	4.5		21.49	1			81
	1919	735.40	11,457	66	14	93	6.7		266.34	4,951	17	24	1.31	5.4		41.10	2			85
	1920	1,050.26	13,959	71	17	1.28	7.5		478.46	7,344	18	28	2.49	6.4		70.49	1	5	14.10	94
	1921	1,324.12	14,023	69	17	1.60	9.4		640.36	7,479	16	39	3.34	8.5		112.73	3	10		88
	1922	1,368.50	18,011	70	22	1.63	7.6		557.83	9,035	17	47	2.91	6.2		167.97	3	19		90

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STATEMENT "D"—Continued

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Domestic light							Commercial light							Power				
	Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Number of consumers	Average horsepower	Average cost per horsepower \$ c.	Total number of consumers
Weston—																			
1912	3,979.81	...	225	...	...	...	7.2 +	750.00	...	15	...	...	...	7.2 +	1,674.28	4	...	...	344
1913	4,117.20	...	360	...	...	...	22.5	1,475.74	...	35	...	...	...	22.5	6,166.97	6	...	...	400
1914	3,741.84	79,766	352	17	80	4.7	...	1,599.97	26,774	78	40	2.38	6.0	...	4,958.59	10	...	...	440
1915	4,407.36	96,186	441	21	93	4.6	...	1,305.90	27,564	90	27	1.30	4.7	...	4,798.33	9	...	...	540
1916	5,477.65	135,272	475	25	1.00	...	...	1,407.31	31,898	88	30	1.13	...	...	5,202.84	11	...	...	574
1917	5,942.00	155,303	542	24	97	3.8	...	1,467.63	35,800	83	35	1.44	4.1	...	16,420.90	12	850	19.32	637
1918	6,288.15	...	...	...	...	...	...	1,403.92	...	...	...	...	...	...	19,578.73	11	882	22.19	...
1919	7,453.63	310,258	667	39	93	2.4	...	1,819.82	65,319	108	50	1.40	2.8	...	20,861.85	17	936	22.29	792
1920	9,047.65	363,877	745	42	1.06	2.2	...	2,125.38	36,279	104	...	...	...	...	25,110.01	13	927	27.00	862
1921	10,086.61	626,817	1,030	51	82	1.6	...	2,183.96	76,122	120	53	1.51	2.9	...	19,057.66	14	999	19.08	1,164
1922	14,808.44	724,340	1,150	55	1.13	2.0	...	2,484.85	95,766	130	64	1.66	2.6	...	27,737.15	16	1,276	21.72	1,296
Williamsburg—																			
1915	403.72	...	44	...	...	...	None	139.26	...	9	...	...	...	None	...	1	...	...	54
1916	568.66	7,392	41	14	1.11	7.7	...	224.29	3,934	9	36	2.08	5.7	...	285.73	1	...	...	51
1917	551.07	7,003	42	16	1.09	7.9	...	280.09	3,347	10	30	2.33	8.4	...	256.38	1	9	28.48	53
1918	547.71	6,798	44	13	1.04	8.1	...	313.21	3,915	11	30	2.37	8.0	...	205.51	1	15	13.70	56
1919	785.76	7,334	42	15	1.49	10.6	...	312.45	5,981	14	36	1.86	5.2	...	334.03	2	18	18.50	58
1920	759.05	7,842	41	16	1.54	9.7	...	253.05	4,506	7	41	1.75	5.5	...	317.42	2	22	14.40	50
1921	926.67	...	47	...	...	...	...	439.04	...	12	...	3.05	...	...	230.38	1	9	25.60	70
1922	1,391.67	9,985	46	...	...	...	...	241.37	5,674	14	...	...	...	...	257.92	1	14	18.42	61

STATEMENT "D"—Concluded

Showing Comparative Revenue, Number of Consumers, Total Kw-hr. Consumption, Domestic and Commercial Light, Average Monthly Consumption per Consumer, Average Monthly Bill, and Net Cost per Kw-hr. for the Years 1912, 1913, 1914, 1915, 1916, 1917, 1918, 1919, 1920, 1921 and 1922; also Average Horsepower Sold and Average Cost per Horsepower per Year to Power Consumers.

Municipality	Year	Domestic light						Commercial light						Power						
		Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Avg monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Number of consumers	Average horsepower	Average cost per horsepower \$ c.	Total number of consumers
Woodville—																				
	1915	324.34	.....	35	.....	92	9.8	12.5	563.68	.....	28	.....	.....	.....	12.5	1,149.17	3	.....	.....	66
	1916	496.52	5,049	41	9	1.25	8.9	.....	512.07	6,618	24	21	1.62	7.7	.....	1,185.54	3	.....	.....	68
	1917	689.70	7,741	51	14	1.25	8.9	.....	591.94	8,512	23	31	2.15	7.0	.....	1,072.28	3	50	21.45	77
	1918	722.80	7,373	50	12	1.20	9.8	.....	535.67	6,920	26	26	1.55	7.7	.....	1,152.77	3	50	23.06	79
	1919	847.09	10,067	58	15	1.22	8.4	.....	637.49	9,434	27	29	1.97	6.7	.....	1,218.70	3	50	24.36	88
	1920	1,423.96	14,060	80	17	1.72	10.1	.....	1,122.12	11,569	25	.....	.....	.....	.....	1,296.75	3	50	.....	.....
	1921	2,195.02	20,723	84	21	2.18	10.6	.....	1,330.14	11,580	28	35	3.96	11.5	.....	1,846.69	3	50	36.93	115
	1922	2,079.40	20,585	87	20	2.04	10.1	.....	1,341.09	13,940	29	41	3.99	9.6	.....	1,470.02	3	50	29.40	119
Wyoming—																				
	1917	658.99	9,309	56	12	98	7.1	None	581.47	8,065	34	20	1.43	7.1	None	.....	.....	.....	.....	90
	1918	718.62	10,125	57	15	1.06	7.0	.....	593.40	8,273	32	20	1.49	7.1	.....	.....	.....	.....	.....	89
	1919	777.48	10,951	68	13	95	7.3	.....	637.26	7,541	33	19	1.61	8.4	.....	73.10	1	.....	.....	102
	1920	1,116.01	29,500	100	29	1.10	3.8	.....	953.51	10,000	20	31	2.91	9.5	.....	665.29	2	22	30.25	122
	1921	1,550.65	16,511	86	16	1.50	.....	.....	1,226.83	13,928	39	30	2.62	8.8	.....	747.17	4	36	20.75	129
	1922	1,696.84	16,139	94	15	1.57	10.5	.....	1,218.89	192.45	39	41	2.61	6.3	.....	628.67	2	26	24.20	135
Zurich—																				
	1918	810.66	5,785	49	8	1.17	14.0	Flat	873.86	5,623	33	12	1.89	15.5	Flat	3,084.22	1	50	61.68	83
	1919	878.22	7,441	52	12	1.41	11.8	.....	766.98	5,546	36	13	1.78	13.8	.....	2,710.24	2	53	51.14	90
	1920	881.70	8,503	55	13	1.36	10.4	.....	991.52	7,701	39	24	3.18	12.9	.....	2,773.80	2	59	47.00	96
	1921	954.55	9,612	59	14	1.35	9.9	.....	1,009.12	9,847	39	21	2.16	10.2	.....	2,343.29	2	54	43.39	100
	1922	1,062.95	11,802	65	16	1.43	9.0	.....	1,132.66	11,282	42	24	2.36	10.0	.....	2,172.10	3	57	58.11	110

STATEMENT "E"

Street Light Installation in Hydro Municipalities, December 31, 1922, showing Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps	Cost per lamp	Total cost	Cost per capita
				\$ c.	\$ c.	\$ c.
Acton.....	1,742	{ 100 60	80 c.p. s 100 watt m	{ 11.00 11.00 }	1,848.13	1.06
Ailsa Craig.....	547	52	100 " m	15.00	780.00	1.42
Alexandria.....	2,319	130	100 " m	27.00	3,510.00	1.51
Alliston.....	1,321	{ 97 13	100 " s 100 " m	{ 18.00 18.00 }	1,998.00	1.51
Alvinston.....	659	86	100 " m	26.00	1,385.82	*
Ancaster Twp.....		75	100 " m	12.00	888.00	**
Apple Hill.....		23	100 " m	28.00	483.00	**
Arthur.....	1,222	71	100 " m	25.00	1,523.72	1.24
Aylmer.....	2,251	{ 136 12	100 " m 250 " m	{ 18.50 34.50 }	2,930.00	1.30
Ayr.....	817	78	100 " m	14.00	1,092.00	1.33
Baden.....		61	100 " m	10.00	610.00	**
Barrie.....	6,888	482	100 " s	8.00	3,841.29	0.55
Beachville.....		42	100 " m	11.00	495.00	**
Beaverton.....	986	80	100 " m	15.50	1,231.98	1.25
Beeton.....	586	62	100 " s	20.00	1,240.00	2.11
Blenheim.....	1,580	{ 139 13	150 " s 400 " s	{ 13.00 34.00 }	2,197.00	1.39
Bloomfield.....	512	42	100 " s	27.00	1,066.50	2.08
Bolton.....	658	60	100 " m	16.00	975.89	1.43
Bothwell.....	613	77	100 " m	15.00	1,146.25	1.87
Bradford.....	1,028	{ 60 7	100 " s 100 " m	{ 22.00 21.00 }	1,474.20	1.43
Brampton.....	4,407	583	100 " m	7.00	4,109.83	0.93
Brantford.....	31,362	{ 147 3,430 70 11 2	Mag. arcs s 100 watt m 150 " m 200 " m 500 " m	{ 40.00 7.00 8.00 10.00 40.00 }	26,674.12	0.85
Brantford Twp....		183	100 " m	16.00	2,727.84	**

sSeries system.

mMultiple system.

*Operation for less than a year.

**Population not shown in Government statistics.

STATEMENT "E"—Continued

Street Light Installation in Hydro Municipalities, December 31, 1922, showing Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps	Cost per lamp	Total cost	Cost per capita
Brechin.....		9	100 watt <i>m</i>	\$ c. 22.00	\$ c. 198.00	\$ ** c.
Brigden.....		{ 25 30	60 " <i>m</i> 100 " <i>m</i>	{ 16.00 18.00 }	6.66	**
Brockville.....	9,377	{ 512 97 280	100 " <i>s</i> 100 " <i>m</i> 60 " <i>m</i>	{ }	2,000.00	0.96
Burford.....		52	100 " <i>m</i>	16.00	832.00	**
Burgessville.....		21	100 " <i>m</i>	16.00	336.00	**
Caledonia.....	1,335	101	100 " <i>m</i>	9.00	990.00	0.74
Cannington.....	951	69	100 " <i>m</i>	20.00	1,388.00	1.45
Carleton Place...	4,123	230	60 " <i>m</i>	8.00	1,838.00	0.44
Chatham.....	15,084	{ 68 37 83 676 7	500 " <i>s</i> 100 " <i>s</i> 400 " <i>s</i> 100 " <i>s</i> 100 " <i>s</i>	{ 38.00 11.00 30.00 12.00 30.00 }	13,776.12	0.91
Chatsworth.....	287	{ 26 2	150 " <i>m</i> 100 " <i>m</i>	{ 16.00 16.00 }	448.00	1.56
Chesley.....	1,803	108	100 " <i>s</i>	16.00	1,714.67	0.95
Chesterville.....	941	65	100 " <i>m</i>	19.00	1,235.00	1.31
Chippawa.....	1,029	72	100 " <i>m</i>	16.00	1,344.00	1.30
Clinton.....	1,941	{ 127 12 12 1	80 " <i>s</i> 100 " <i>s</i> 100 " <i>m</i> 500 " <i>m</i>	{ 11.00 11.00 11.00 75.00 }	1,696.92	0.87
Coldwater.....	647	44	100 " <i>m</i>	14.00	616.00	0.95
Collingwood.....	6,237	407	150 " <i>s</i>	10.00	4,045.00	0.64
Comber.....		50	100 " <i>m</i>	17.50	858.36	**
Cookstown.....		56	100 " <i>s</i>	20.00	1,121.40	**
Creemore.....	540	55	100 " <i>m</i>	16.00	880.08	1.63
Dashwood.....		41	100 " <i>m</i>	15.00	615.00	**
Delaware.....		21	100 " <i>m</i>	18.00	378.00	**
Dorchester.....		27	100 " <i>m</i>	15.00	493.00	**
Drayton.....	618	60	100 " <i>m</i>	18.00	1,080.00	1.74

*s*Series system.*m*Multiple system.

*Operation for less than a year.

**Population not shown in Government statistics.

STATEMENT "E"—Continued

Street Light Installation in Hydro Municipalities, December 31, 1922, showing Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps	Cost per lamp	Total cost	Cost per capita
				\$ c.	\$ c.	\$ c.
Dresden.....	1,456	119	80 watt s	14.00	1,745.34	1.19
Drumbo.....		30	100 " m	14.00	455.00	**
Dublin.....		35	100 " m	20.00	700.00	**
Dundalk.....	725	70	100 " m	15.00	1,042.50	1.44
Dundas.....	5,100	{ 340 1 3	{ 100 " m 200 " m 40 " m	{ 11.00 16.00 10.80	3,620.24	0.71
Dunnville.....	3,583	{ 209 27	{ 100 c.p. s 600 " s	{ 14.00 65.00	4,528.60	1.26
Durham.....	1,622	93	100 watt s	14.00	1,488.00	0.91
Dutton.....	845	101	100 " m	13.00	1,289.40	1.52
Elmira.....	2,370	163	100 " m	12.00	1,956.00	0.82
Elmvale.....		54	100 " m	14.00	756.00	**
Elmwood.....		23	150 " m	23.50	540.50	**
Elora.....	1,091	93	100 " m	11.00	1,140.00	1.04
Embro.....	463	43	100 " m	19.00	845.76	1.83
Etobicoke Twp.....		370	100 " m	14.00	4,491.90	**
Exeter.....	1,507	{ 158 23	{ 100 " m 200 " m	{ 10.00 20.00	2,010.00	1.33
Fergus.....	1,762	{ 24 117	{ 150 " m 100 " m	{ 14.00 14.00	1,755.00	0.99
Flesherton.....	410	46	100 " m	16.00	736.00	1.79
Ford City.....	5,113	128	100 " m	12.00	484.00	*
Forest.....	1,422	{ 49 157	{ 100 " m 60 " m	{ 20.00 13.50	2,484.14	1.74
Galt.....	13,332	{ 950 308 8 143 82	{ 100 c.p. s 100 watt m 150 " m 300 " m 500 " m	{ 8.00 12.00 18.00 35.00 40.00	18,229.81	1.36
Georgetown.....	2,098	{ 164 33	{ 100 " m 100 " m	{ 11.00 12.00	1,786.16	†
Glencoe.....	835	123	100 " m	20.00	3,023.75	3.62
Goderich.....	4,108	{ 291 16 8 8	{ 80 " s 3 Lt. stds. m 250 watt m 100 " m	{ 12.50 40.00 25.00 20.00	4,637.50	1.12

sSeries system.

mMultiple system.

†Includes Glen Williams.

*Operation for less than a year.

**Population not shown in Government statistics.

STATEMENT "E"—Continued

Street Light Installation in Hydro Municipalities, December 31, 1922, showing Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps	Cost per lamp	Total cost	Cost per capita
Grand Valley	582	52	100 watt <i>m</i>	\$ c. 20.00	\$ c. 1,066.06	\$ c. 1.83
Granton		32	100 " <i>m</i>	15.00	480.00	**
Gravenhurst	1,621	{ 24 99 15	{ 150 c.p. <i>s</i> 100 " <i>s</i> 100 " <i>m</i>	{ 18.00 18.00 18.00	1,885.77	1.16
Guelph	18,027	{ 1 8 4 1,035 99 1 2 8	{ 32 c.p. <i>m</i> 16 " <i>m</i> 60 watt <i>m</i> 100 " <i>m</i> 200 " <i>m</i> 400 " <i>m</i> 1000 " <i>m</i> 300 " <i>m</i>	{ 8.50 4.25 4.00 7.00 12.50 25.00 46.50 18.75	8,790.54	0.48
Hagersville	1,271	100	100 " <i>m</i>	8.00	800.00	0.63
Hamilton	118,243	{ 7,658 730 150 409 8 26 14 40	{ 100 " <i>m</i> 200 " <i>m</i> 250 " <i>m</i> 500 " <i>m</i> 300 " <i>m</i> 40 " <i>m</i> 60 " <i>m</i> 100 " <i>m</i>	{ 7.50 11.00 12.00 37.00 18.00 Various Special 12.00	81,147.64	0.68
Hanover	2,695	{ 113 16 10	{ 100 c.p. <i>s</i> 250 " <i>s</i> 200 watt <i>m</i>	{ 20.00 28.00 28.00	2,961.78	1.09
Harriston	1,311	61	100 " <i>s</i>	17.00	976.00	0.74
Havelock	1,258	{ 63 16	{ 100 " <i>s</i> 250 " <i>s</i>	{ 27.00 39.00	2,291.25	1.82
Hensall	738	65	100 " <i>m</i>	15.00	1,048.75	1.42
Hespeler	2,853	{ 128 28	{ 100 " <i>s</i> 250 " <i>s</i>	{ 11.50 17.50	1,962.00	0.68
Highgate	417	45	100 " <i>m</i>	15.00	677.50	1.62
Holstein		14	100 " <i>m</i>	35.00	469.98	**
Huntsville	2,316				1,938.00	0.83
Ingersoll	5,253	{ 306 26	{ 100 " <i>s</i> 500 c.p. <i>s</i>	{ 12.00 35.00	4,141.67	0.78
Kemptville	1,220	63	100 watt <i>m</i>	32.00	2,016.00	1.65
Kincardine	2,159	{ 122 13 12	{ 100 " <i>s</i> 200 " <i>m</i> 100 " <i>m</i>	{ 24.00 29.00 18.00	3,593.00	1.66

*s*Series system.

*m*Multiple system.

*Operation for less than a year.

**Population not shown in Government statistics.

STATEMENT "E"—Continued

Street Light Installation in Hydro Municipalities, December 31, 1922, showing Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps	Cost per lamp	Total cost	Cost per capita
				\$ c.	\$ c.	\$ c.
Kingston.....	22,234	{ 263 95 93	{ arcs orn. s 100 watt m	{ 60.00 75.00 20.00	20,367.05	0.91
Kirkfield.....		22	100 " m	26.50	546.00	**
Kitchener.....	22,717	{ 20 6 1,672 80 80 19 49 43	{ 250 c.p. s 1000 " s 80 " s 200 " s 500 " s 100 " s 300 " s	{ 17.35 36.00 9.00 12.00 30.00 9.00 22.00	17,754.20	0.78
Lakefield.....	1,193	92	100 watt m	24.00	2,188.00	1.83
Lambeth.....		{ 1 31	{ 500 " m 100 " m	{ 47.00 16.00	560.70	**
Lanark.....	575	35	100 " m	28.00	976.67	1.70
Lancaster.....	612	40	100 " m	30.00	1,160.00	1.89
Listowel.....	2,429	{ 236 26	{ 60 " m 350 " m	{ 12.00 30.00	3,510.00	1.44
London.....	59,784	{ 287 2,515 94 28	{ 400 " s 100 " s 500 " m 100 " m	{ 18.00 11.00 45.00 Parks & Private	36,155.73	0.62
Lucan.....	624	68	100 " m	14.00	951.96	1.52
Lucknow.....	887	53	100 " m	29.00	1,537.00	1.73
Lynden.....		33	100 " m	15.00	548.90	**
Markdale.....	908	65	100 " s	15.00	978.00	1.08
Markham.....	970	90	100 " s	21.00	1,906.89	1.96
Marmora.....	792	{ 35 46	{ 100 " m 75 " m	{ 27.00 27.00	2,187.00	2.76
Martintown.....		15	100 " m	30.00	450.00	**
Maxville.....	785	48	100 " s	35.00	1,484.00	1.89
Merritton.....	2,589	275	100 " m	8.00	2,200.00	0.85
Midland.....	7,022	{ 19 331	{ 750 " m 100 " s	{ 40.00 12.00	4,743.50	0.67
Milton.....	1,900	183	100 " m	10.00	1,838.30	0.96
Milverton.....	1,054	{ 85 12	{ 100 " s 200 " s	{ 9.00 17.00	969.00	0.92

sSeries system.

mMultiple system.

*Operation for less than a year.

**Population not shown in Government statistics.

STATEMENT "E"—Continued

Street Light Installation in Hydro Municipalities, December 31, 1922, showing Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps	Cost per lamp	Total cost	Cost per capita
				\$ c.	\$ c.	\$ c.
Mimico.....	4,187	{ 174 60	100 watt 200 " <i>m</i>	{ 13.00 24.00 }	3,248.00	0.77
Mitchell.....	1,699	170	100 " <i>s</i>	12.00	2,040.00	1.20
Moorefield.....		25	100 " <i>m</i>	19.00	475.00	**
Mount Brydges.....		36	100 " <i>m</i>	14.00	514.21	**
Mount Forest....	1,761	194	100 " <i>s</i>	16.00	2,664.43	1.51
Neustadt.....	445	39	100 " <i>s</i>	25.00	975.00	2.19
Newbury.....	301	46	100 " <i>m</i>	20.00	920.00	3.00
New Hamburg....	1,401	209	100 " <i>m</i>	10.50	2,305.75	1.64
New Toronto....	2,947	{ 59 123 12	200 " <i>m</i> 75 " <i>m</i> 75 " <i>m</i>	{ 23.00 13.00 18.00 }	2,560.55	0.87
Niagara Falls....	15,895	{ 106 738 6	1000 c.p. <i>s</i> 100 " <i>s</i> 600 " <i>s</i>	{ 47.00 12.00 47.00 }	18,550.07	1.16
Niagara-on-the-Lake.....	1,714	193	100 watt <i>m</i>	14.00	2,535.51	1.47
Norwich.....	1,307	{ 112 20	100 " <i>m</i> 400 " <i>m</i>	{ 10.50 42.00 }	1,771.62	1.35
Norwood.....	748	{ 84 1	100 " <i>s</i> 100 " <i>s</i>	{ 26.00 30.00 }	2,248.95	3.00
Oil Springs.....	491	43	100 " <i>m</i>	16.00	587.90	1.19
Omeme.....	485	{ 32 10	100 " <i>s</i> 250 " <i>s</i>	{ 16.00 36.00 }	911.01	1.88
Orangeville.....	2,503	{ 57 91	250 " <i>s</i> 100 " <i>s</i>	{ 30.00 24.00 }	3,844.10	1.53
Ottawa.....	112,899	{ 59 401 316 717 357 2,900	arcs 100 c.p. <i>s</i> 400 " <i>s</i> 600 " <i>s</i> 100 watt <i>s</i> 100 " <i>m</i>	{ 45.00 10.00 35.00 45.00 6.00 48c. per ft.	{ 51,212.75 16,013.35 }	{ 0.43 *** }
Otterville.....		22	100 " <i>m</i>	15.00	330.00	**
Owen Sound.....	12,360	{ 34 481 64 43 79 43	150 " <i>s</i> 100 " <i>s</i> 200 " <i>s</i> 400 " <i>s</i> 100 " <i>m</i> 200 " <i>m</i>	{ 15.00 15.00 19.00 26.00 13.00 16.00 }	11,612.50	0.94

*s*Series system.

*m*Multiple system.

***Collected as local improvement on frontage basis and not included in average cost.

*Operation for less than a year.

**Population not shown in Government statistics.

STATEMENT "E"—Continued

Street Light Installation in Hydro Municipalities, December 31, 1922, showing Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps	Cost per lamp	Total cost	Cost per capita
Palmerston.....	1,780	{ 112 8	100 watt 400 " s	\$ c. 15.00 60.00 }	\$ c. 1,746.75	\$ c. 0.98
Paris.....	4,400	{ 408 11 25	100 " 400 " 500 " m	s s m 10.50 42.50 52.50 }	5,609.40	1.27
Parkhill.....	1,201	83	100 " m	20.00	2,154.19	1.79
Penetang.....	3,920	179	100 " s	14.00	2,561.00	0.65
Perth.....	3,710	{ 46 10 3 4	100 c.p. 250 " 400 " 600 " s	s s s s 22.00 34.00 46.00 64.00 }	1,715.53	0.46
Peterboro.....	21,439	{ 102 1,127	Magnetite arcs 60 watt m	50.50 9.00 }	15,825.69	0.73
Petrolia.....	2,911	{ 142 24	100 " 250 " s	s s 15.00 50.00 }	3,518.28	1.21
Pictou.....	3,263	277	100 " s	16.00	4,420.61	1.32
Plattsville.....		32	100 " m	18.00	555.00	**
Port Arthur.....	15,629	2,783	..... m	.....	16,963.00	1.12
Port Colborne....	3,123	216	100 " m	12.00	2,153.25	0.69
Port Credit.....	1,119	110	100 " m	11.00	1,122.00	1.00
Port Dalhousie...	1,424	100	100 " m	14.00	1,442.00	0.92
Port Dover.....	1,380	{ 12 91	300 " 100 " m	m m 52.00 27.00 }	3,183.00	2.30
Port McNicoll....	576	38	100 " m	15.00	570.00	0.99
Port Perry.....	1,162	92	100 " m	25.00	386.83	*
Port Stanley.....	717	{ 140 || 30	100 " 100 " m	m m 13.00 6.50 }	1,791.83	||
Prescott.....	2,723	{ 161 210	100 " 100 " m	m m 13.50 12.00 }	4,693.50	1.72
Preston.....	5,547	{ 1 248 32 34	400 c.p. 80 " 150 " 750 " s	s s s s 21.00 10.00 11.00 60.00 }	4,835.96	0.87
Priceville.....		15	100 watt m	31.50	472.50	**
Princeton.....		20	100 " m	20.00	400.00	**
Queenston.....		30	100 " m	21.00	627.80	*

sSeries system.
mMultiple system.

*Operation for less than a year.
**Population not shown in Government statistics.
||Summer service only.

STATEMENT "E"—Continued

Street Light Installation in Hydro Municipalities, December 31, 1922, showing Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps	Cost per lamp	Total cost	Cost per capita
				\$ c.	\$ c.	\$ c.
Ridgetown.....	2,267	{ 136 17	100 watt s 400 " s	{ 13.00 30.00 }	2,252.04	0.99
Ripley.....		48	100 " m	27.00	1,296.00	**
Rockwood.....		60	100 " m	14.00	788.06	**
Rodney.....	756	80	100 " m	14.00	1,048.47	1.38
St. Catharines....	20,961	2,746	100 " m	7.50	18,151.15	0.87
St. George.....		33	100 " m	12.00	396.00	**
St. Jacobs.....		40	100 " m	12.00	480.00	**
St. Marys.....	4,039	{ 210 115	100 c.p. s 250 " s	{ 10.00 16.00 }	3,875.66	0.95
St. Thomas.....	17,892	{ 24 114 1,045	250 " s 500 watt s 75 " s	{ 14.25 37.50 9.50 }	14,406.23	0.80
Sarnia.....	14,905	{ 78 646	1000 " s 100 " s	{ 45.00 13.00 }	12,238.49	0.82
Scarboro' Twp....		{ 15 37 64 48	100 " m 100 " m 100 " s 100 " s	{ 16.00 18.00 16.00 18.00 }	2,794.00	**
Seaforth.....	1,950	{ 71 60 21	100 " s 75 " s 75 " s	{ 12.00 10.00 12.00 }	1,702.00	0.88
Sebringville.....		15	100 " m	12.00	.....	**
Shelburne.....	1,101	91	100 " s	15.00	1,365.00	1.24
Simcoe.....	3,951	{ 27 246 2	250 " s 100 " s 100 " m	{ 30.00 9.00 9.00 }	2,846.65	0.42
Smiths Falls.....	6,529	{ 200 50	100 " m 200 " m	{ 16.00 21.00 }	4,250.00	0.65
Springfield.....	432	40	100 " m	20.00	800.00	1.85
Stamford Twp....		390	100' " m	10.00	3,894.33	**
Stayner.....	1,004	{ 17 59	200 " m 60 " s	{ 18.00 14.00 }	1,192.00	1.18
Stratford.....	17,611	{ 779 11 6 173	100 " s 500 " s 500 " s 500 " s	{ 9.50 40.00 30.00 35.00 }	15,380.61	0.87

sSeries system.
mMultiple system.

*Operation for less than a year.
**Population not shown in Government Statistics.

STATEMENT "E"—Continued

Street Light Installation in Hydro Municipalities, December 31, 1922, showing Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps	Cost per lamp	Total cost	Cost per capita
Strathroy.....	2,627	{ 304 32	100 watt 250 " s	{ \$ c. 8.00 15.00 }	\$ c. 2,884.65	\$ c. 1.09
Sunderland.....		27	100 " m	23.00	621.00	**
Tara.....	521	67	100 " m	20.00	1,340.00	2.57
Tavistock.....	1,003	{ 66 33	100 " 200 " m	{ 12.00 16.00 }	1,325.32	1.32
Tecumseh.....	1,019	20	60 " m	12.00	60.00	*
Teeswater.....	838	{ 15 35	250 " 100 " s	{ 45.00 28.00 }	1,655.00	1.97
Thamesford.....		34	100 " m	15.00	510.00	**
Thamesville.....	817	78	100 " m	14.00	1,150.40	1.40
Thedford.....	583	65	100 " m	30.00	975.00	*
Thorndale.....		26	100 " m	18.00	468.00	**
Thornton.....		21	100 " m	40.00	708.75	**
Thorold.....	5,243	{ 353 32	60 " 200 " m	{ 5.00 14.00 }	2,263.00	0.43
Tilbury.....	1,851	{ 66 1	100 " 200 " m	{ 15.00 15.00 }	1,005.00	0.54
Tillsonburg.....	3,027	284	80 " s	10.00	2,691.70	0.89
Toronto.....	522,942	{ 4 6 43,041 143 25 76 859 46 5 442 298	{ 50 " 60 " 100 " 150 " 200 " 250 " 300 " 500 " 1000 " 5 Lt. stds 1 Lt. stds m	{ 6.00 4.20 7.00-11.00 10.50-13.50 16.00-18.00 17.50-22.00 25.00 40.00-47.50 80.00 42.50 55.00 }	362,971.60	0.69
Tottenham.....	512	49	100 watt s	25.00	1,225.00	2.39
Uxbridge.....	1,492	120	100 " m	23.00	400.00	*
Vaughan Twp....		14	100 " m	17.00	238.00	**
Victoria Harbour.	1,485	60	100 " m	11.00	671.00	0.46
Walkerville.....	7,303	{ 736 149	60 " 100 " m	{ 5.60 7.50 }	6,138.44	††

sSeries system.

*Operation for less than a year.

mMultiple system.

**Population not shown in Government statistics.

††Includes Ford City and Tecumseh. Part of cost paid direct in the form of debenture charges.

STATEMENT "E"—Continued

Street Light Installation in Hydro Municipalities, December 31, 1922, showing Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps	Cost per lamp	Total cost	Cost per capita
				\$ c.	\$ c.	\$ c.
Wallaceburg.....	3,921	{ 179 29	100 watt 400 " s	{ 11.00 25.00 }	2,603.96	0.66
Wardsville.....	212	30	75 " m	29.00	870.00	4.10
Waterdown.....	815	66	100 " m	10.00	660.00	0.81
Waterford.....	1,112	120	100 " m	11.00	1,402.80	1.26
Waterloo.....	5,976	{ 167 249 38 14 44 10	100 " s 80 " s 100 " m 200 " m 5 Lt. stds m 3 Lt. stds m	{ 10.00 10.00 10.00 15.00 40.00 25.00 }	6,224.60	1.04
Watford.....	1,039	90	100 watt m	17.00	1,604.40	1.54
Waubashene.....		30	100 " m	14.00	420.00	**
Welland.....	8,880	{ 127 519	200 " m 100 " m	{ 16.00 9.00 }	7,320.98	0.82
Wellesley.....		50	100 " m	15.00	767.14	**
Wellington.....	840				882.00	1.05
West Lorne.....	803				1,190.04	1.48
Weston.....	3,299	{ 64 284 32 5 7 8	600 c.p. s 100 " s 150 " s 100 " s 5 Lt. stds m 300 watt m	{ 61.00 9.00 10.00 8.00 30.00 20.00 }	5,220.67	1.58
Williamsburg.....		17	100 " m	20.50	348.50	**
Winchester.....	1,058	117	100 " m	19.00	1,930.50	1.82
Windsor.....	38,530	{ 2,481 62 402	100 " s 400 " s 600 " s	{ 13.00 28.00 50.00 }	44,435.25	1.15
Wingham.....	2,470	{ 82 45	100 c.p. s 250 " m	{ 31.00 44.00 }	4,480.67	1.81
Woodbridge.....	679	77	100 watt m	11.00	825.00	1.21
Woodstock.....	10,164	{ 50 445 172 105	250 " s 80 " s 60 " m 100 " m	{ 20.00 8.00 8.00 8.00 }	6,712.08	0.66
Woodville.....	455	36	100 " m	25.00	900.00	1.98
Wyoming.....	489	48	100 " m	20.00	960.00	1.96
Zurich.....		60	100 " m	15.00	900.00	**

s Series system.

m Multiple system.

*Operation for less than a year.

**Population not shown in Government statistics.

STATEMENT F

Cost of Power to Hydro Municipalities and Power Rates to
Consumers

STATEMENT G

Domestic and Commercial Rates in Hydro Municipalities

STATEMENT

Cost of Power to Hydro Municipalities

Municipality	Note	Interim rates at which power is billed to the municipality and adjusted to cost at the end of the year										
		1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Acton.....	D	.....	36.00	36.00	36.00	36.00	36.00	36.00	35.00	32.00	32.00	37.00
Ailsa Craig.....	D	.....	.....	.....	.....	49.67	49.67	49.67	49.00	49.00	49.00	49.00
Alexandria.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	65.00	80.00	80.00
Alliston.....	D	.....	.....	.....	.....	.....	.....	40.00	40.00	50.00	60.00	65.00
Alvinston.....	D	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	95.95
Ancaster.....	D	.....	.....	.....	.....	.....	.....	.....	25.81	25.81	25.81	25.81
Apple Hill.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60.00	85.00	85.00
Arthur.....	D	.....	.....	.....	.....	.....	45.00	45.00	45.00	65.00	85.00	85.00
Aylmer.....	D	.....	.....	.....	.....	.....	.....	39.00	38.00	38.00	45.00	50.00
Ayr.....	D	.....	.....	.....	37.40	37.40	37.40	37.40	45.00	50.00	50.00	50.00
Baden.....	D	36.95	37.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00	36.00
Barrie.....	D	.....	33.70	33.70	33.70	33.70	31.00	31.00	29.00	29.00	29.00	29.00
Barton Twp.....	D	.....	.....	Served by		Hamilton		.....	.....	.....	.....	.....
Beachville.....	D	33.89	31.00	31.00	31.00	31.00	28.00	28.00	27.00	27.00	30.00	37.00
Beaverton.....	D	.....	.....	.....	6.17	59.00	41.21	41.21	45.00	55.00	60.00	52.00
Beeton.....	D	.....	.....	.....	.....	.....	.....	45.00	45.00	85.00	85.00	85.00
Blenheim.....	D	.....	.....	.....	.....	43.70	43.70	43.70	50.00	50.00	53.00	54.00
Bloomfield.....	D	.....	.....	.....	.....	.....	.....	.....	66.16	66.16	66.16	72.50
Bolton.....	D	.....	.....	.....	43.00	43.00	43.00	43.00	43.00	60.00	60.00	60.00
Bothwell.....	D	.....	.....	.....	.....	59.26	59.26	59.26	60.00	60.00	60.00	55.00
Bradford.....	.....	.....	.....	.....	.....	.....	.....	47.00	47.00	75.00	75.00	75.00
Brampton.....	B	29.00	25.00	25.00	25.00	24.00	22.00	22.00	22.00	20.00	20.00	26.00
Brantford.....	A	.....	.....	19.50	19.50	19.00	19.00	19.00	18.00	18.00	20.00	25.00
Brantford Twp.....	D	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Brechin.....	D	.....	.....	.....	56.79	67.00	50.00	50.00	55.00	85.00	90.00	90.00
Bridgeport, ext.....	.....	.....	.....	Served by		Kitchener		.....	.....	.....	.....	.....
Brigden.....	D	.....	.....	.....	.....	.....	57.56	57.50	57.50	57.50	60.00	66.00
Brockville.....	.....	.....	.....	.....	.....	.....	.....	30.00	40.00	45.19	55.00	55.00
Brooklin.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bullock's Corners & Greensville, ext.....	.....	.....	.....	Served by		Dundas		.....	.....	.....	.....	.....
Burford.....	D	.....	.....	.....	37.50	37.50	37.50	37.50	60.00	70.00	70.00	70.00
Burgessville.....	D	.....	.....	.....	.....	.....	48.38	48.38	48.00	48.00	48.00	52.00
Caledonia.....	D	29.10	29.10	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	29.00
Cannington.....	D	.....	.....	.....	65.77	63.00	45.79	45.79	50.00	65.00	65.00	65.00
Carleton Place.....	D	.....	.....	.....	.....	.....	.....	.....	33.00	33.00	44.00	44.00
Chatham.....	A	.....	.....	.....	30.78	30.78	30.78	30.78	29.00	29.00	28.00	31.00
Chatsworth.....	D	.....	.....	.....	.....	30.18	30.18	30.18	30.00	45.00	60.00	70.00
Chesley.....	D	.....	.....	.....	.....	40.00	40.00	40.00	40.00	45.00	55.00	55.00
Chesterville.....	D	.....	.....	36.12	43.29	46.00	46.00	46.00	46.00	76.73	85.00	85.00
Chippawa.....	D	.....	.....	.....	.....	.....	.....	.....	35.00	35.00	32.00	32.00
Clinton.....	A	.....	.....	39.00	39.00	42.00	42.00	42.00	43.00	43.00	46.00	48.00
Coldwater.....	D	.....	28.00	28.00	28.00	28.00	28.00	28.00	40.00	50.00	60.00	60.00
Collingwood.....	D	.....	33.79	33.79	33.79	33.97	30.00	30.00	28.00	28.00	36.00	45.00
Comber.....	D	.....	.....	.....	.....	56.22	56.22	56.22	60.00	60.00	60.00	60.00
Cookstown.....	D	.....	.....	.....	.....	.....	.....	35.00	35.00	60.00	60.00	60.00

Note A—Power delivered at 46,000, 26,400 or 22,000 volts.

Note B—Power delivered at 13,200 or 12,000 volts.

“F”

and Power Rates to Consumers

Power rates to consumers

1921					1922				
Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount	Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount
\$ c.	cents	cents	cents	%	\$ c.	cents	cents	cents	%
1.00	3.1	2.1	0.15	10	1.00	3.1	2.1	0.15	10
1.00	5.2	3.5	0.15	10	1.00	4.9	3.3	0.15	10
1.00	6.4	4.3	0.15	10	1.00	6.4	4.3	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.9	3.3	0.15	10
1.00					1.00	8.3	5.5	0.15	10
1.00	3.0	2.0	0.15	10	1.00	3.0	2.0	0.15	10
1.00	6.5	4.4	0.15	10	1.00	6.5	4.4	0.15	10
1.00	6.8	4.6	0.15	10	1.00	6.8	4.6	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.9	3.3	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.9	3.3	0.15	10
1.00	2.8	1.8	0.15	10	1.00	3.1	2.0	0.15	10
1.00	2.2	1.5	0.15	10	1.00	2.2	1.5	0.15	10
1.00	Hamilton rates plus 10%				1.00	Hamilton rates plus 10%			
1.00	2.11	1.39	0.167	10 & 10	1.00	2.2	1.5	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.9	3.3	0.15	10
1.00	6.8	4.6	0.15	10	1.00	6.8	4.6	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.9	3.3	0.15	10
1.00	6.5	4.3	0.15	10	1.00	6.5	4.3	0.15	10
1.00	5.4	3.6	0.15	10	1.00	5.4	3.6	0.15	10
1.00	7.1	4.7	0.15	10	1.00	6.4	4.3	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.9	3.3	0.15	10
1.00	1.67	1.11	0.133	10 & 10	1.00	2.0	1.33	0.167	10 & 10
1.00	2.133	1.33	0.173	25 & 10	1.00	2.11	1.39	0.167	10 & 10
1.00	2.3	1.6	0.15	10	1.00	2.8	1.8	0.15	10
1.00	6.8	4.6	0.15	10	1.00	6.8	4.6	0.15	10
1.00	2.8	1.8	0.15	10	1.00	2.8	1.8	0.15	10
1.00	6.8	4.5	0.15	10	1.00	6.8	4.5	0.15	10
1.00	5.2	3.5	0.15	10	1.00	5.2	3.5	0.15	10
1.00	4.5	3.0	0.15	10					
1.00	2.8	1.8	0.15	10	1.00	2.8	1.8	0.15	10
1.00	6.8	4.5	0.15	10	1.00	6.8	4.5	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.9	3.3	0.15	10
1.00	2.33	1.56	0.167	10 & 10	1.00	2.33	1.56	0.167	10 & 10
1.00	6.8	4.6	0.15	10	1.00	5.9	4.0	0.15	10
1.00	3.6	2.4	0.15	10	1.00	3.6	2.4	0.15	10
1.00	2.5	1.7	0.15	10	1.00	2.5	1.7	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.9	3.3	0.15	10
1.00	5.1	3.4	0.15	10	1.00	5.1	3.4	0.15	10
1.00	5.2	3.5	0.15	10	1.00	5.2	3.5	0.15	10
1.00	2.8	1.8	0.15	10	1.00	2.8	1.8	0.15	10
1.00	4.7	3.1	0.15	10	1.00	4.9	3.3	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.9	3.3	0.15	10
1.00	2.5	1.7	0.2	10 & 10	1.00	3.2	2.1	0.15	10
1.00	6.8	4.6	0.15	10	1.00	6.5	4.4	0.15	10
1.00	6.8	4.6	0.15	10	1.00	6.8	4.6	0.15	10

Note C—Power delivered at 6,600 volts.

Note D—Power delivered at 4,000 or 2,000 volts.

STATEMENT

Cost of Power to Hydro Municipalities

Municipality	Note	Interim rates at which power is billed to the municipality and adjusted to cost at the end of the year										
		1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Creemore.....	D			54.13	54.13	54.13	54.13	54.13	60.00	65.00	65.00	70.00
Dashwood.....	D							56.75	56.00	56.00	56.00	62.00
Delaware.....	D				46.56	46.56	46.56	46.56	50.00	85.00	85.00	85.00
Dorchester.....	D				45.00	45.00	45.00	45.00	50.00	50.00	50.00	50.00
Drayton.....	D							60.45	60.00	65.00	70.00	72.00
Dresden.....	D				43.00	43.00	43.00	43.00	42.00	38.00	38.00	38.00
Drumbo.....	D				40.73	40.73	40.73	40.73	45.00	60.00	55.00	55.00
Dublin.....	D						47.91	47.91	48.00	60.00	60.00	70.00
Dundalk.....	D					27.30	27.30	27.30	27.00	38.00	50.00	55.00
Dundas.....	B	17.00	16.00	15.00	15.00	14.00	14.00	14.00	14.00	14.00	17.00	22.00
Dunnville.....	A							27.77	27.77	35.00	40.00	50.00
Durham.....	D					33.97	33.97	33.97	33.00	45.00	50.00	50.00
Dutton.....	D				43.53	43.53	43.53	43.53	43.00	40.00	40.00	44.00
Elmira.....	D		38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00
Elmvale.....	D		31.00	31.00	31.00	31.00	31.00	31.00	31.00	37.00	37.00	37.00
Elmwood.....	D							35.00	35.00	45.00	55.00	55.00
Elora.....	D			33.97	33.97	33.97	33.97	33.97	40.00	40.00	40.00	44.00
Embro.....	D				39.85	45.00	45.00	45.00	60.00	75.00	75.00	80.00
Etobicoke Tp.....	D						27.00	27.00	27.00	27.00	27.00	27.00
Exeter.....	D					41.66	41.66	41.66	41.00	41.00	41.00	46.00
Fergus.....	D			33.97	33.97	33.97	33.97	33.97	40.00	40.00	44.00	47.00
Flesherton.....	D					25.96	25.96	25.96	26.00	36.00	45.00	55.00
Ford City.....				Served by Walkerville			63.27	63.27	63.00	60.00	60.00	60.00
Forest.....	D											
Galt.....	C	25.00	22.00	21.50	21.50	21.00	20.00	20.00	20.00	20.00	21.00	25.00
Gamebridge.....				Served by Brechin								
Georgetown.....	D		36.00	36.00	36.00	36.00	36.00	36.00	36.00	35.00	35.00	38.00
Glencoe.....	D									78.35	78.35	76.00
Glen Williams, ext.....				Served by Georgetown								
Goderich.....	A			37.00	37.00	43.00	43.00	43.00	43.00	43.00	50.00	55.00
Grand Valley.....	D						45.00	45.00	45.00	60.00	70.00	60.00
Granton.....	D					48.61	48.61	48.61	48.00	55.00	55.00	55.00
Gravenhurst.....	C									15.00	15.00	20.00
Guelph.....	B	25.00	22.00	21.00	21.00	20.00	20.00	20.00	19.00	19.00	20.00	25.00
Hagersville.....	D		33.21	33.21	33.21	33.21	33.21	33.21	34.00	36.00	36.00	36.00
Hamilton.....	B	17.00	16.00	15.00	15.00	14.00	14.00	14.00	14.00	14.00	16.00	20.00
Hanover.....	D							35.00	35.00	35.00	40.00	35.00
Harriston.....	D					46.62	46.62	46.62	48.00	52.00	55.00	50.00
Hensall.....	D					47.76	47.67	47.00	55.00	57.00	64.00	
Hespeler.....	C	26.00	23.00	23.00	23.00	22.50	21.00	21.00	21.00	21.00	23.00	29.00
Highgate.....	D						51.82	51.82	51.00	51.00	55.00	55.00
Holstein.....	D					43.50	43.50	43.50	44.00	75.00	90.00	90.00
Horning's Mills.....												
Huntsville.....	D						22.51	22.51	25.00	25.00	25.00	25.00
Ingersoll.....	B	28.00	25.50	25.50	25.50	25.00	23.00	23.00	23.00	21.00	23.00	29.00

Note A—Power delivered at 46,000, 26,400 or 22,000 volts.

Note B—Power delivered at 13,200 or 12,000 volts.

"F"—Continued

and Power Rates to Consumers

Power rates to consumers									
1921					1922				
Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount	Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount
\$ c.	cents	cents	cents	%	\$ c.	cents	cents	cents	%
1.00	6.4	4.3	0.15	10	1.00	6.4	4.3	0.15	10
1.00	6.7	4.5	0.15	10	1.00	6.7	4.5	0.15	10
1.00	5.4	3.6	0.15	10	1.00	5.4	3.6	0.15	10
1.00	5.4	3.6	0.15	10	1.00	5.4	3.6	0.15	10
1.00	7.1	4.7	0.15	10	1.00	7.1	4.7	0.15	10
1.00	3.9	2.6	0.15	10	1.00	3.6	2.4	0.15	10
1.00	4.8	3.2	0.15	10	1.00	4.8	3.2	0.15	10
1.00	6.4	4.3	0.15	10	1.00	6.4	4.3	0.15	10
1.00	4.2	2.8	0.15	10	1.00	4.2	2.8	0.15	10
1.00	1.67	1.11	0.15	10 & 10	1.00	2.0	1.33	0.167	10 & 10
1.00	3.5	2.3	0.15	10	1.00	4.2	2.8	0.15	10
1.00	4.5	3.0	0.15	10	1.00	4.5	3.0	0.15	10
1.00	3.5	2.3	0.15	10	1.00	3.5	2.3	0.15	10
1.00	3.6	2.4	0.15	10	1.00	3.6	2.4	0.15	10
1.00	3.6	2.4	0.15	10	1.00	3.6	2.4	0.15	10
1.00	5.4	3.6	0.15	10	1.00	5.4	3.6	0.15	10
1.00	3.2	2.1	0.15	10	1.00	3.9	2.6	0.15	10
1.00	7.1	4.7	0.15	10	1.00	7.1	4.7	0.15	10
1.00	3.2	2.1	0.15	10	1.00	2.8	1.8	0.15	10
1.00	3.9	2.6	0.15	10	1.00	3.9	2.6	0.15	10
1.00	3.5	2.3	0.15	10	1.00	3.9	2.6	0.15	10
1.00	4.2	2.8	0.15	10	1.00	4.2	2.8	0.15	10
1.00	3.5	2.3	0.15	10	1.00	3.1	2.0	0.15	10
1.00	7.1	4.7	0.15	10	1.00	6.8	4.6	0.15	10
1.00	2.0	1.33	0.167	25 & 10	1.00	2.0	1.4	0.15	10
1.00	8.7	5.8	0.15	10	1.00	8.7	5.8	0.15	10
1.00	2.0	1.4	0.15	10	1.00	2.5	1.7	0.15	10
1.00	8.6	5.7	0.15	10	1.00	7.8	5.2	0.15	10
1.00	3.6	2.4	0.15	10	1.00	4.1	2.7	0.15	10
1.00	4.5	3.0	0.15	10	1.00	4.5	3.0	0.15	10
1.00	6.8	4.6	0.15	10	1.00	6.8	4.6	0.15	10
1.00	5.6	3.8	0.15	10	1.00	5.6	3.8	0.15	10
1.00	3.5	2.25	0.15	10	1.00	3.5	2.25	0.15	10
1.00	1.467	1.0	0.133	25 & 10	1.00	1.67	1.11	0.133	10 & 10
1.00	2.5	1.7	0.15	10	1.00	2.5	1.7	0.15	10
1.00	1.43	1.0	0.143	30 & 10	1.00	1.67	1.11	0.133	10 & 10
1.00	3.3	2.2	0.15	10	1.00	3.3	2.2	0.15	10
1.00	4.8	3.2	0.15	10	1.00	4.8	3.2	0.15	10
1.00	5.4	3.6	0.15	10	1.00	5.6	3.8	0.15	10
1.00	2.11	1.39	0.167	10 & 10	1.00	2.5	1.7	0.15	10
1.00	5.8	3.9	0.15	10	1.00	5.8	3.9	0.15	10
1.00	9.3	6.2	0.15	10	1.00	9.3	6.2	0.15	10
1.00	5.6	3.8	0.15	10	1.00	5.6	3.8	0.15	10
1.00	3.5	2.25	0.15	10	1.00	3.5	2.25	0.15	10
1.00	1.67	1.11	0.133	10 & 10	1.00	2.0	1.4	0.15	10

Note C—Power delivered at 6,600 volts.

Note D—Power delivered at 4,000 or 2,200 volts.

STATEMENT

Cost of Power to Hydro Municipalities

Municipality	Note	Interim rates at which power is billed to the municipality and adjusted to cost at the end of the year										
		1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Kemptville.....										85.00	80.00	
Kincardine.....											48.00	
Kingston.....	A							28.00		25.00	25.00	27.00
Kirkfield.....										45.00	60.00	60.00
Kitchener.....	B	25.00	22.50	21.50	21.50	21.00	20.00	20.00	19.00	19.00	20.00	25.00
Lakefield.....										36.00	36.00	45.00
Lambeth.....	D				46.56	46.56	46.56	46.56	50.00	85.00	75.00	75.00
Lanark.....										92.50	92.50	92.50
Lancaster.....										97.00	97.00	97.00
Listowel.....	D					37.41	37.41	37.41	37.00	37.00	37.00	37.00
London.....	B	28.00	24.00	23.00	23.00	22.00	21.00	21.00	19.00	19.00	20.00	25.00
Lucan.....	D				47.74	47.74	47.74	47.74	40.00	40.00	35.00	38.00
Lucknow.....												60.00
Lynden.....	D				33.00	33.00	33.00	33.00	40.00	50.00	50.00	50.00
Markdale.....	D					23.24	23.24	23.24	23.00	35.00	50.00	50.00
Markham.....	D									77.74	77.74	70.00
Martintown.....										54.00	85.00	85.00
Maxville.....										86.00	86.00	86.00
Merritton.....												18.00
Midland.....	D	21.00	20.30	19.45	19.37	19.37	19.00	19.00	20.00	28.00	32.00	32.00
Milton.....	B		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	32.00
Milverton.....	D					35.63	35.63	35.63	35.00	35.00	35.00	35.00
Mimico.....	D	30.74	30.00	28.00	28.00	28.00	27.00	27.00	25.00	21.00	21.00	26.00
Mitchell.....	A	38.00	37.00	37.00	37.00	37.00	36.00	36.00	36.00	36.00	36.00	37.00
Moorefield.....	D							63.93	63.00	70.00	70.00	70.00
Mount Brydges.....	D				46.56	46.56	46.56	46.56	50.00	70.00	70.00	76.00
Mount Forest.....	D					34.51	34.51	34.51	40.00	55.00	65.00	65.00
Neustadt.....	D								42.50	45.00	55.00	55.00
Newbury.....	D										67.10	67.10
New Hamburg.....	D	32.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00	38.00
New Toronto.....	D			28.00	28.00	28.00	27.00	27.00	25.00	20.00	22.00	26.00
Niagara Falls.....	B & D					11.50	11.50	11.50	11.50	11.50	12.50	17.50
Niagara-on-the-Lake	B									28.00	28.00	26.00
Norwich.....	D	30.00	32.00	32.00	32.00	38.00	38.00	38.00	35.00	35.00	35.00	39.00
Oil Springs.....	D							38.54	38.00	43.00	43.00	48.00
Omeme.....	D							39.39	39.39	39.39	39.39	39.39
Orangeville.....	D					35.00	35.00	35.00	35.00	55.00	65.00	65.00
Ottawa.....	A	15.00	15.00	15.00	14.00	14.00	14.00	14.00	14.00	14.00	13.50	13.00
Otterville.....	D				45.00	45.00	45.00	50.00	50.00	50.00	50.00	52.00
Owen Sound.....	D				31.00	31.00	31.00	28.00	28.00	28.00	30.00	40.00
Palmerston.....	D					40.82	40.82	40.82	45.00	50.00	45.00	45.00
Paris.....	A			21.00	21.00	21.00	21.00	21.00	20.00	19.00	21.00	26.00
Penkill.....	D									75.23	75.00	75.00
Penetang.....	D	28.80	26.50	26.50	26.50	26.50	22.00	22.00	22.00	32.00	30.00	30.00
Perth.....	D								32.00	32.00	45.00	45.00

Note A—Power delivered at 46,000, 26,400 or 22,000 volts.

Note B—Power delivered at 13,200 or 12,000 volts.

"F"—Continued

and Power Rates to Consumers

Power rates to consumers									
1921					1922				
Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount	Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount
\$ c.	cents	cents	cents	%	\$ c.	cents	cents	cents	%
1.00	8.6	5.7	0.15	10	1.00	8.6	5.7	0.15	10
1.00	5.4	3.6	0.15	10	1.00	5.4	3.6	0.15	10
1.00	2.0	1.4	0.15	10	1.00	2.0	1.4	0.15	10
1.00	5.4	3.6	0.15	10	1.00	5.4	3.6	0.15	10
1.00	1.867	1.267	0.16	25 & 10	1.00	2.0	1.33	0.167	10 & 10
1.00	4.2	2.8	0.15	10	1.00	4.2	2.8	0.15	10
1.00	5.4	3.6	0.15	10	1.00	5.4	3.6	0.15	10
1.00	8.6	5.7	0.15	10	1.00	8.6	5.7	0.15	10
1.00	8.6	5.7	0.15	10	1.00	8.6	5.7	0.15	10
1.00	3.8	2.5	0.15	10	1.00	3.8	2.5	0.15	10
1.00	1.867	1.267	0.16	25 & 10	1.00	2.0	1.33	0.167	10 & 10
1.00	4.2	2.8	0.15	10	1.00	3.9	2.6	0.15	10
1.00	7.1	4.7	0.15	10	1.00	7.1	4.7	0.15	10
1.00	4.5	3.0	0.15	10	1.00	4.5	3.0	0.15	10
1.00	3.5	2.3	0.15	10	1.00	3.5	2.3	0.15	10
1.00	9.3	6.2	0.15	10	1.00	7.8	5.2	0.15	10
1.00	6.4	4.3	0.15	10	1.00	6.4	4.3	0.15	10
1.00	8.0	5.3	0.15	10	1.00	8.0	5.3	0.15	10
1.00	2.0	1.4	0.15	10	1.00	1.67	1.11	0.133	10 & 10
1.00	2.0	1.4	0.15	10	1.00	2.00	1.4	0.15	10
1.00	2.2	1.5	0.15	10	1.00	2.2	1.5	0.15	10
1.00	3.3	2.2	0.15	10	1.00	3.3	2.2	0.15	10
1.00	2.11	1.39	0.167	10 & 10	1.00	2.2	1.5	0.15	10
1.00	3.6	2.4	0.15	10	1.00	3.6	2.4	0.15	10
1.00	7.1	4.7	0.15	10	1.00	7.1	4.7	0.15	10
1.00	5.4	3.6	0.15	10	1.00	6.1	4.1	0.15	10
1.00	4.2	2.8	0.15	10	1.00	4.2	2.8	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.9	3.3	0.15	10
1.00	8.1	5.4	0.15	10	1.00	8.1	5.4	0.15	10
1.00	2.9	1.9	0.15	10	1.00	3.6	2.4	0.15	10
1.00	2.133	1.33	0.173	25 & 10	1.00	2.0	1.33	0.167	10 & 10
1.00	1.33	0.867	0.10	25 & 10	1.00	1.867	1.267	0.16	25 & 10
1.00	2.5	1.7	0.15	10	1.00	2.2	1.5	0.15	10
1.00	3.0	2.0	0.15	10	1.00	3.2	2.1	0.15	10
1.00	4.8	3.2	0.15	10	1.00	4.8	3.2	0.15	10
1.00	4.5	3.0	0.15	10	1.00	4.5	3.0	0.15	10
1.00	3.6	2.4	0.15	10	1.00	3.6	2.4	0.15	10
1.00	1.8	1.2	0.15	15 & 10	1.00	1.8	1.2	0.15	15 & 10
1.00	4.7	3.1	0.15	10	1.00	4.7	3.1	0.15	10
1.00	2.0	1.4	0.15	10	1.00	2.8	1.8	0.15	10
1.00	4.7	3.1	0.15	10	1.00	4.7	3.1	0.15	10
1.00	1.67	1.11	0.133	10 & 10	1.00	2.0	1.33	0.167	10 & 10
1.00	7.8	5.2	0.15	10	1.00	7.4	4.9	0.15	10
1.00	2.0	1.4	0.15	10	1.00	2.0	1.4	0.15	10
1.00	3.6	2.4	0.15	10	1.00	3.6	2.4	0.15	10

Note C—Power delivered at 6,600 volts.

Note D—Power delivered at 4,000 or 2,200 volts.

STATEMENT

Cost of Power to Hydro Municipalities

Municipality	Note	Interim rates at which power is billed to the municipality and adjusted to cost at the end of the year										
		1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Peterboro.....	C D			18.00	18.00	17.70	17.70	17.50	17.50	17.50	17.50	22.50
Petrolia.....	D					36.26	36.26	36.26	36.00	36.00	36.00	36.00
Plattsville.....	D				49.27	49.27	49.27	49.27	60.00	65.00	65.00	75.00
Picton.....	D								69.14	69.14	69.14	52.00
Port Arthur.....	A	20.30	19.50	22.25	22.71	20.75	20.75	19.75	19.75			
Port Colborne.....	A									21.00	21.00	25.00
Port Credit.....	D	36.79	31.00	28.00	28.00	27.00	27.00	27.00	25.00	23.00	23.00	28.00
Port Dalhousie.....	D		22.30	21.42	22.49	24.31	25.81	24.85	21.56	17.00	17.00	22.00
Port Dover.....												62.00
Port McNicoll.....	D				35.00	35.00	25.00	25.00	35.00	85.00	85.00	40.00
Port Perry.....	D											90.00
Port Robinson, ext.				Serve d by	Welland							
Port Stanley.....	D	59.75	55.50	43.85	50.90	49.53	46.78	45.54	53.03	53.00	50.00	50.00
Prescott.....	D			39.59	28.67	25.00	25.00	25.00		44.93	55.00	52.00
Preston.....	C	25.00	21.50	21.00	21.00	20.00	19.00	19.00	19.00	19.00	22.00	27.00
Priceville.....												47.00
Princeton.....	D				65.95	65.95	65.95	65.95	70.00	85.00	90.00	90.00
Queenston.....												18.42
Ridgetown.....	D					47.17	47.17	47.17	47.00	47.00	45.00	45.00
Ripley.....												60.00
Riverside.....	D											52.75
Rockwood.....	D		38.00	38.00	38.00	38.00	38.00	38.00	38.00	55.00	55.00	65.00
Rodney.....	D						63.00	63.00	63.00	63.00	55.00	50.00
St. Catharines.....	B			14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	18.25
St. Clair Beach.....	D											75.59
St. George.....	D				38.78	38.78	38.78	38.78	45.00	45.00	45.00	49.00
St. Jacobs.....	D						32.44	42.18	32.00	32.00	35.00	40.00
St. Marys.....	B	38.00	29.50	29.50	29.50	28.00	28.00	28.00	28.00	28.00	32.00	35.00
St. Thomas.....	B	32.00	29.00	28.00	28.00	27.00	26.00	26.00	24.00	24.00	25.00	30.00
Sandwich.....				Serve d by	Wind sor							
Sarnia.....	A					38.00	38.00	38.00	38.00	36.00	35.00	35.00
Scarboro Tp.....	D								25.00	25.00	28.00	35.00
Seaforth.....	A	41.00	40.00	40.00	40.00	40.00	38.00	38.00	38.00	36.00	36.00	40.00
Sebringville, ext.				Serve d by	Stratford							
Shelburne.....	D					30.00	30.00	30.00	30.00	38.00	50.00	50.00
Simcoe.....	A				35.00	35.00	35.00	35.00	32.00	28.00	28.00	34.00
Smiths Falls.....	D							28.00	28.00	28.00	40.00	40.00
Springfield.....	D						65.00	65.00	65.00	65.00	65.00	65.00
Stamford Tp.....	B							16.57	15.00	15.00	16.00	20.00
Stayner.....	D			37.82	37.82	37.82	35.00	35.00	35.00	40.00	40.00	45.00
Stratford.....	A	32.00	30.00	30.00	30.00	29.00	27.00	27.00	25.00	25.00	27.00	30.00
Strathroy.....	B				44.07	44.07	44.07	44.01	42.00	40.00	37.00	40.00
Sunderland.....	D				82.68	81.00	50.00	50.00	55.00	85.00	85.00	85.00
Tara.....	D							37.00	37.00	85.00	90.00	90.00
Tavistock.....	D						78.28	37.01	36.00	35.00	35.00	37.00

Note A—Power delivered at 46,000, 26,400 or 22,000 volts.

Note B—Power delivered at 13,200 or 12,000 volts.

“F”—Continued

and Power Rates to Consumers

Power rates to consumers									
1921					1922				
Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount	Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount
\$ c.	cents	cents	cents	%	\$ c.	cents	cents	cents	%
1.00	1.3	0.8	0.1	10	1.00	1.3	0.8	0.1	10 & 10
1.00	3.1	2.0	0.15	10	1.00	3.1	2.0	0.15	10
1.00	5.4	3.6	0.15	10	1.00	5.4	3.6	0.15	10
1.00	6.4	4.3	0.15	10	1.00	5.6	3.8	0.15	10
1.00	1.75	1.0	0.1	10	1.00	1.75	1.0	0.1	10
1.00	2.5	1.7	0.15	10	1.00	2.5	1.7	0.15	10
1.00	2.0	1.4	0.15	10	1.00	2.3	1.6	0.15	10
1.00	2.33	1.56	0.167	10 & 10	1.00	2.33	1.56	0.167	10 & 10
1.00	6.8	4.6	0.15	10	1.00	7.4	4.9	0.15	10
1.00	1.8	1.2	0.15	10	1.00	4.9	3.3	0.15	10
1.00	5.0	3.0	0.15	10	1.00	7.5	5.0	0.15	10
1.00	4.2	2.8	0.15	10	1.00	2.11	1.39	0.167	10 & 10
1.00	1.67	1.11	0.133	10 & 10	1.00	5.0	3.0	0.15	10
1.00	5.6	3.8	0.15	10	1.00	4.2	2.8	0.15	10
1.00	7.8	5.2	0.15	10	1.00	2.0	1.4	0.15	10
1.00	4.5	3.0	0.15	10	1.00	4.2	2.8	0.15	10
1.00	7.1	4.7	0.15	10	1.00	7.1	4.7	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.9	3.3	0.15	10
1.00	5.6	3.8	0.15	10	1.00	4.9	3.3	0.15	10
1.00	1.6	1.066	0.166	25 & 10	1.00	5.6	3.8	0.15	10
1.00	3.8	2.5	0.15	10	1.00	1.867	1.267	0.16	25 & 10
1.00	3.1	2.0	0.15	10	1.00	7.1	4.7	0.15	10
1.00	3.3	2.2	0.15	10	1.00	3.8	2.5	0.15	10
1.00	1.73	1.133	0.147	25 & 10	1.00	3.1	2.0	0.15	10
1.00	3.5	2.3	0.15	10	1.00	3.1	2.0	0.15	10
1.00	3.1	2.0	0.15	10	1.00	3.1	2.0	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.8	3.2	0.15	10
1.00	3.5	2.3	0.15	10	1.00	3.5	2.3	0.15	10
1.00	4.5	3.0	0.15	10	1.00	3.5	2.3	0.15	10
1.00	3.5	2.3	0.15	10	1.00	4.5	3.0	0.15	10
1.00	3.8	2.5	0.15	10	1.00	3.8	2.5	0.15	10
1.00	2.5	1.7	0.15	10	1.00	2.8	1.8	0.15	10
1.00	3.6	2.4	0.15	10	1.00	3.6	2.4	0.15	10
1.00	7.8	5.2	0.15	10	1.00	7.8	5.2	0.15	10
1.00	1.67	1.11	0.133	10 & 10	1.00	2.0	1.33	0.167	10 & 10
1.00	3.8	2.5	0.15	10	1.00	4.2	2.8	0.15	10
1.00	2.2	1.5	0.15	10	1.00	2.5	1.7	0.15	10
1.00	3.2	2.1	0.15	10	1.00	3.2	2.1	0.15	10
1.00	6.8	4.6	0.15	10	1.00	6.8	4.6	0.15	10
1.00	6.8	4.6	0.15	10	1.00	6.8	4.6	0.15	10
1.00	2.5	1.7	0.15	10	1.00	2.2	1.5	0.15	10

Note C—Power delivered at 6,600 volts.

Note D—Power delivered at 4,000 or 2,200 volts.

STATEMENT

Cost of Power to Hydro Municipalities

Municipality	Note	Interim rates at which power is billed to the municipality and adjusted to cost at the end of the year										
		1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Tecumseh.....	D	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	59.07
Teeswater.....	D	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40.00
Thamesford.....	D	.....	.....	45.00	45.00	45.00	45.00	45.00	50.00	50.00	50.00	54.00
Thamesville.....	D	.....	.....	.....	.....	45.40	45.40	45.40	50.00	60.00	55.00	55.00
Theford.....	D	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	110.00
Thorndale.....	D	.....	.....	45.00	45.00	45.00	45.00	45.00	50.00	60.00	60.00	70.00
Thornton.....	D	.....	.....	.....	.....	.....	.....	43.00	43.00	85.00	85.00	85.00
Thorold.....	B	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22.25
Tilbury.....	D	.....	.....	.....	39.45	39.45	39.45	39.45	45.00	50.00	50.00	50.00
Tillsonburg.....	B	32.00	32.00	32.00	32.00	35.00	35.00	35.00	32.00	30.00	30.00	39.00
Toronto.....	B	18.50	15.00	15.00	15.00	14.50	14.50	14.50	14.50	14.50	17.00	22.00
Toronto Twp.....	D	.....	.....	.....	.....	.....	.....	.....	25.00	25.00	25.00	30.00
Tottenham.....	D	.....	.....	.....	.....	.....	.....	51.00	51.00	85.00	90.00	90.00
Uxbridge.....	D	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	90.00
Victoria Harbor.....	D	.....	.....	.....	35.00	35.00	35.00	35.00	35.00	50.00	45.00	45.00
Walkerville.....	A	.....	.....	38.00	38.00	38.00	38.00	38.00	36.00	36.00	35.00	35.00
Wallaceburg.....	D	.....	.....	.....	38.45	38.45	38.45	38.45	38.00	38.45	35.00	35.00
Wardsville.....	D	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	82.20
Waterdown.....	D	37.50	26.00	26.00	26.00	26.00	26.00	26.00	26.00	26.00	31.00	36.00
Waterford.....	D	.....	.....	.....	39.00	39.00	39.00	39.00	39.00	33.00	33.00	38.00
Waterloo.....	B	26.00	23.50	22.50	22.50	22.00	21.00	21.00	20.00	20.00	21.00	26.00
Watford.....	D	.....	.....	.....	.....	.....	59.45	59.45	65.00	85.00	85.00	85.00
Waubashene.....	D	.....	.....	.....	35.00	35.00	25.00	25.00	30.00	45.00	45.00	45.00
Welland.....	B	.....	14.50	14.00	14.00	14.00	14.00	14.00	14.00	14.00	16.00	20.00
Wellesley.....	D	.....	.....	.....	.....	.....	39.96	39.96	39.00	39.00	39.00	43.00
Wellington.....	D	.....	.....	.....	.....	.....	.....	.....	52.76	52.76	52.76	50.00
West Hamilton, ext. ....	.....	.....	.....	Serve d by	.....	Anca ster	.....	.....	.....	.....	.....	.....
West Lorne.....	D	.....	.....	.....	.....	55.60	55.60	55.60	55.00	55.00	50.00	45.00
Weston.....	B	30.00	30.00	30.00	30.00	30.00	30.00	30.00	25.00	23.00	23.00	29.00
Williamsburg.....	D	.....	.....	.....	25.09	30.00	30.00	30.00	30.00	50.00	73.89	95.00
Winchester.....	D	.....	.....	38.28	39.54	43.00	43.00	43.00	43.00	69.84	85.00	85.00
†Windsor.....	A	.....	.....	38.00	38.00	38.00	38.00	38.00	36.00	36.00	35.00	35.00
Wingham.....	D	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45.00
Woodbridge.....	D	.....	.....	.....	33.83	33.83	33.83	33.83	33.00	31.00	31.00	37.00
Woodstock.....	B	26.00	23.00	23.00	23.00	23.00	21.00	21.00	20.00	20.00	21.00	27.00
Woodville.....	D	.....	.....	.....	70.24	70.00	50.00	50.00	55.00	80.00	80.00	80.00
Wyoming.....	D	.....	.....	.....	.....	38.34	38.34	38.34	38.00	60.00	60.00	60.00
York Tp.....	D	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Zurich.....	D	.....	.....	.....	.....	.....	.....	69.34	69.00	60.00	60.00	74.00

Note A—Power delivered at 46,000, 26,400 or 22,000 volts.

Note B—Power delivered at 13,200 or 12,000 volts.

†Windsor rates for 60 cycle power are 25% higher than rates given here.

“ F ”—Concluded

and Power Rates to Consumers

Power rates to consumers									
1921					1922				
Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount	Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount
\$ c.	cents	cents	cents	%	\$ c.	cents	cents	cents	%
1.00	4.2	2.8	0.15	10	1.00	4.9	3.3	0.15	10
1.00	5.4	3.6	0.15	10	1.00	4.2	2.8	0.15	10
1.00	6.4	4.3	0.15	10	1.00	5.4	3.6	0.15	10
					1.00	6.1	4.1	0.15	10
					1.00	9.0	6.0	0.15	10
1.00	5.6	3.8	0.15	10	1.00	5.6	3.8	0.15	10
1.00	6.8	4.6	0.15	10	1.00	6.8	4.6	0.15	10
					1.00	2.0	1.4	0.15	10
1.00	5.1	3.4	0.15	10	1.00	4.9	3.3	0.15	10
1.00	2.8	1.8	0.15	10	1.00	3.5	2.3	0.15	10
†A.C. 1.25 & 1.00	1.5	0.75	0.4	10	†A.C. 1.25 & 1.00	1.5	0.75	0.4	10
†D.C. 1.35 & 1.00	2.5	1.25	0.6	10	†D.C. 1.35 & 1.00	2.5	1.25	0.6	10
1.00	4.2	2.8	0.15	10	1.00	4.2	2.8	0.15	10
1.00	6.8	4.6	0.15	10	1.00	6.8	4.6	0.15	10
					1.00	7.5	5.0	0.15	10
1.00	5.6	3.8	0.15	10	1.00	5.6	3.8	0.15	10
1.00	3.1	2.0	0.15	10	1.00	3.1	2.0	0.15	10
1.00	3.2	2.1	0.15	10	1.00	3.2	2.1	0.15	10
					1.00	8.6	5.7	0.15	10
1.00	3.3	2.2	0.15	10	1.00	3.3	2.2	0.15	10
1.00	3.1	2.0	0.15	10	1.00	3.1	2.0	0.15	10
1.00	1.67	1.11	0.133	10 & 10	1.00	2.33	1.56	0.167	10 & 10
1.00	7.1	4.7	0.15	10	1.00	7.1	4.7	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.9	3.3	0.15	10
1.00	1.73	1.33	0.147	25 & 10	1.00	1.67	1.11	0.133	10 & 10
1.00	3.9	2.6	0.15	10	1.00	4.3	2.9	0.15	10
1.00	5.4	3.5	0.15	10	1.00	5.4	3.6	0.15	10
1.00	2.8	1.8	0.15	10	1.00	2.8	1.8	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.7	3.1	0.15	10
1.00	2.133	1.33	0.173	25 & 10	1.00	2.33	1.56	0.167	10 & 10
1.00	6.4	4.3	0.15	10	1.00	6.4	4.3	0.15	10
1.00	6.4	4.3	0.15	10	1.00	6.4	4.3	0.15	10
1.00	3.1	2.0	0.15	10	1.00	3.1	2.0	0.15	10
1.00	5.4	3.6	0.15	10	1.00	5.4	3.6	0.15	10
1.00	2.5	1.7	0.15	10	1.00	3.1	2.0	0.15	10
1.00	1.867	1.267	0.16	25 & 10	1.00	2.11	1.39	0.167	10 & 10
1.00	6.8	4.6	0.15	10	1.00	6.8	4.6	0.15	10
1.00	7.1	4.7	0.15	10	1.00	7.1	4.7	0.15	10
1.00	2.11	1.39	0.167	10 & 10	1.00	2.11	1.39	0.167	10 & 10
1.00	6.8	4.6	0.15	10	1.00	6.8	4.6	0.15	10

†1.25 and 1.35 for 1st 10 h.p. 1.00 for all additional h.p.

Note C—Power delivered at 6,600 volts.

Note D—Power delivered at 4,000 or 2,200 volts.

STATEMENT

Lighting Rates in

Municipality	1921								
	Domestic				Commercial				Prompt payment discount
	Service charge per 100 sq. ft.	1st 3 kw-hr per 100 sq. ft. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	1st 30 hr. per kw-hr.	Next 70 hr. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	
	cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
Acton.....	3	3	1.5	.....	6	3	0.6	0.75	10
Ailsa Craig.....	3	5	2.5	.....	10	5	1.0	0.75	10
Alexandria.....	3	7	3.5	1.00	14	7	1.4	1.50	10
Alliston.....	3	6	3	.....	12	6	1.2	1.00	10
Alvinston.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ancaster.....	3	5	2.5	.....	10	5	1	0.75	10
Apple Hill.....	3	7	3.5	1.50	14	7	1.4	1.50	10
Arthur.....	3	8	4	.....	16	8	1.6	1.50	10
Aylmer.....	3	5	2.5	.....	10	5	1.0	0.75	10
Ayr.....	3	5	2.5	.....	10	5	1	1.00	10
Baden.....	3	2.5	1.25	.....	5	2.5	0.5	0.75	10
Barrie.....	3	2	1	.....	4	2	0.4	0.75	10+10
Barton Twp.....	10% above Hamilton	3	1.5	5	2.5	0.15	.....	1.00	10
Beachville.....	3	3	1.5	.....	6	3	0.6	0.75	10
Beaverton.....	3	5	2.5	.....	10	5	1	1.25	10
Beeton.....	3	8	4	.....	16	8	1.6	1.50	10
Blenheim.....	3	4.5	2.25	.....	9	4.5	0.9	0.75	10
Bloomfield.....	3	7	3.5	.....	14	7	1.4	1.00	10
Bolton.....	3	6	3	.....	12	6	1.2	1.00	10
Bothwell.....	3	6	3	.....	12	6	1.2	1.00	10
Bradford.....	3	8	4	.....	16	8	1.6	1.50	10
Brampton.....	3	2	1	.....	4	2	0.4	0.75	10
Brantford.....	3	2	1	.....	3.5	1.2	0.12	0.75	10
Brantford Twp.....	3	3	1.5	.....	6	3	0.6	1.00	10
Brechin.....	3	8	4	.....	16	8	1.6	1.50	10
Bridgeport.....	3	Kitchen rate + 10%	.....	.....	.....	.....	.....	.....	.....
Brigden.....	3	6	3	.....	12	6	1.2	1.00	10
Brockville.....	3	6	3	.....	12	6	1.2	1.25	10
Brooklin.....	3	5	2.5	.....	10	5	1	.....	10
Broughdale.....	3	3	1.5	.....	.....	.....	.....	.....	10
Bullock's Corners and Greenville ..	3	4	2	.....	8	4	0.8	1.00	10
Burford.....	3	7	3.5	.....	14	7	1.4	1.50	10
Burgessville.....	3	5.5	2.75	.....	11	5.5	1.1	0.75	10
Caledonia.....	3	3	1.5	.....	6	3	0.6	0.75	10
Cannington.....	3	6	3	.....	12	6	1.2	1.50	10
Carleton Place.....	3	4.5	2.25	.....	9	4.5	0.9	1.00	10
Chatham.....	3	3	1.5	.....	6	3	0.6	0.75	10
Chatsworth.....	3	7	3.5	.....	14	7	1.4	1.50	10
Chesley.....	3	6	3	.....	12	6	1.2	1.25	10
Chesterville.....	3	7	3.5	.....	14	7	1.4	1.50	10
Chippewa.....	3	4	2	.....	8	4	0.8	1.00	10
Clinton.....	3	4	2	.....	8	4	0.8	0.75	10
Coldwater.....	3	6	3	.....	12	6	1.2	1.25	10
Collingwood.....	3	3	1.5	.....	6	3	0.6	0.75	10
Comber.....	3	7	3.5	.....	14	7	1.4	1.25	10

"G"

Hydro Municipalities

1922								
Domestic				Commercial				Prompt payment discount
Per 100 sq. ft.	1st 3 kw-hr. per 100 sq. ft. per kw-hr.	All Additional per kw-hr.	Minimum net monthly bill	1st 30 hr. per kw-hr.	Next 70 hr. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	
cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
3	3	1.5	0.75	6	3	0.6	0.75	10
3	5	2	0.75	10	5	1.0	0.75	10
3	7	2	1.50	14	7	1.4	2.00	10
3	6	2	1.00	12	6	1.2	1.00	10
3	8	2	1.50	16	8	1.6	1.50	10
3	5	2	0.75	10	5	1	0.75	10
3	7	2	1.50	14	7	1.4	2.00	10
3	8	2	1.50	16	8	1.6	1.50	10
3	4	2	0.75	8	4	0.8	.75	10
3	4	2	1.00	8	4	0.8	1.00	10
3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
3	2	1	0.75	4	2	0.4	0.75	10+10
3	3	1.5	.....	5	2.5	0.15	1.00	10
3	4.5	2	1.25	9	4.5	0.9	1.25	10
3	8	2	1.50	16	8	1.6	1.50	10
3	4.5	2	0.75	9	4.5	0.9	0.75	10
3	7	2	1.00	14	7	1.4	1.00	10
3	6	2	1.00	12	6	1.2	1.00	10
3	5	2	1.00	10	5	1.0	1.00	10
3	8	2	1.50	16	8	1.6	1.50	10
3	2	1	0.75	4	2	0.4	0.75	10
3	2	1	0.75	3.5	1.75	0.35	0.75	10
3	3	1.5	1.00	6	3	0.6	1.00	10
3	8	2	1.50	16	8	1.6	1.50	10
3	6	Kitchen	er rate	+ 10%				
3	6	2	1.00	12	6	1.2	1.00	10
3	6	2	1.00	12	6	1.2	1.00	10
3	3	1.5	.....					10
3	4	2	.....	8	4	0.8	1.00	10
3	7	2	1.50	14	7	1.4	1.50	10
3	5.5	2	0.75	11	5.5	1.1	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	5	2	1.50	10	5	1	1.50	10
3	4.5	2	1.00	9	4.5	0.9	1.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	7	2	1.50	14	7	1.4	1.50	10
3	6	2	1.25	12	6	1.2	1.25	10
3	7	2	1.50	14	7	1.4	1.50	10
3	4	2	1.00	8	4	0.8	1.00	10
3	3.5	1.75	0.75	7	3.5	0.7	0.75	10
3	5	2	1.00	10	5	1	1.00	10
3	4	2	1.00	8	4	0.8	1.00	10
3	6	2	1.25	12	6	1.2	1.25	10

STATEMENT

Lighting Rates in

Municipality	1921								
	Domestic				Commercial				Prompt payment discount
	Service charge per 100 sq. ft.	1st 3 kw-hr per 100 sq. ft. per kw-hr.	All additional per kw-hr	Minimum net monthly bill	1st 30 hr. per kw-hr	Next 70 hr. per kw-hr	All additional per kw-hr	Minimum net monthly bill	
	cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
Cookstown.....	3	7	3.5	.....	14	7	1.4	1.50	10
Creemore.....	3	7	3.5	.....	14	7	1.4	1.00	10
Dashwood.....	3	7	3.5	.....	14	7	1.4	1.25	10
Delaware.....	3	7	3.5	.....	14	7	1.4	1.25	10
Doon and Blair, ext.	3	4	2	.....	8	4	0.8	1.00	10
Dorchester.....	3	5.5	2.75	.....	11	5.5	1.1	0.75	10
Drayton.....	3	6.5	3.25	.....	13	6.5	1.3	1.25	10
Dresden.....	3	4	2	.....	8	4	0.8	0.75	10
Drumbo.....	3	6	3	.....	12	6	1.2	1.00	10
Dublin.....	3	7	3.5	.....	14	7	1.4	1.50	10
Dundalk.....	3	5.5	2.75	.....	11	5.5	1.1	1.00	10
Dundas.....	3	2	1	.....	5	2	0.15	0.75	10
Dunnville.....	3	4	2	.....	8	4	0.8	0.75	10
Durham.....	3	5	2.5	.....	10	5	1	1.00	10
Dutton.....	3	3	1.5	.....	6	3	0.6	0.75	10
Elmira.....	3	3	1.5	.....	6	3	0.6	0.75	10
Elmvale.....	3	4.5	2.25	.....	9	4.5	0.9	1.00	10
Elmwood.....	3	6	3	.....	12	6	1.2	1.50	10
Elora.....	3	3	1.5	.....	6	3	0.6	0.75	10
Embro.....	3	7.5	3.75	.....	15	7.5	1.5	1.50	10
Etobicoke Twp.....	3	4	2	.....	8	4	0.8	0.75	10
Exeter.....	3	4	2	.....	8	4	0.8	0.75	10
Fergus.....	3	3.5	1.75	.....	7	3.5	0.7	0.75	10
Flesherton.....	3	5	2.5	.....	10	5	1.0	1.50	10
Ford City.....	3	4	2	.....	8	4	0.8	0.75	10
Forest.....	3	6	3	.....	12	6	1.2	1.00	10
Galt.....	3	2	1	.....	4	2	0.4	0.75	10
Gamebridge.....	3+50c	8	4	.....	16	8	1.6	1.50	10
Georgetown.....	3	2	1	.....	4	2	0.4	0.75	10
Glencoe.....	3	8	4	.....	16	8	1.6	1.00	10
Glen Williams, ext..	3	4	2	.....	8	4	0.8	0.75	10
Goderich.....	3	3.5	1.75	.....	7	3.5	0.7	0.75	10
Grand Valley.....	3	8	4	.....	16	8	1.6	1.50	10
Grantham Twp.....	.....	.....	.....	Rural Rates	.....	.....	.....	.....	.....
Granton.....	3	6	3	.....	12	6	1.2	1.00	10
Gravenhurst.....	3	4.5	2.25	.....	9	4.5	0.9	1.00	10
Guelph.....	3	2	1	.....	4	2.0	0.4	0.75	10
Hagersville.....	3	2.5	1.25	.....	5	2.5	0.5	0.75	10
Hamilton.....	3	2	1	.....	3.5	1.2	0.12	0.75	10
Hanover.....	3	5	2.5	.....	10	5	1	1.00	10
Harriston.....	3	4.5	2.25	.....	9	4.5	.9	1.00	10
Hensall.....	3	6	3	.....	12	6	1.2	1.00	10
Hespeler.....	3	3	1.5	.....	6	3	0.6	0.75	10
Highgate.....	3	6	3	.....	12	6	1.2	1.00	10
Holstein.....	3	9	4.5	.....	18	9	1.8	1.50	10

“G”—Continued

Hydro Municipalities

1922								
Domestic				Commercial				Prompt payment discount
Service charge per 100 sq. ft.	1st 3 kw- hr. per 100 sq. ft. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	1st 30 hr. per kw-hr.	Next 70 hr. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	
cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
3	7	2	1.50	14	7	1.4	1.50	10
3	6	2	1.00	12	6	1.2	1.00	10
3	7	2	0.75	14	7	1.4	1.25	10
3	6	2	1.25	12	6	1.2	1.25	10
3	4	2	.....	8	4	0.8	1.00	10
3	5	2	0.75	10	5	1	0.75	10
3	6	2	1.25	12	6	1.2	1.25	10
3	4	2	0.75	8	4	0.8	0.75	10
3	6	2	1.00	12	6	1.2	1.00	10
3	7	2	1.50	14	7	1.4	1.50	10
3	5.5	2	1.00	11	5.5	1.1	1.00	10
3	2	1	0.75	5	2	0.15	0.75	10
3	5	2	0.75	10	5	1	0.75	10
3	5	2	1.00	10	5	1	1.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	4.5	2	1.00	9	4.5	0.9	1.00	10
3	6	2	1.50	12	6	1.2	1.50	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	7.5	2	1.50	15	7.5	1.5	1.50	10
3	4	2	0.75	8	4	0.8	0.75	10
3	4	2	0.75	8	4	0.8	0.75	10
3	3.5	1.75	0.75	7	3.5	0.7	0.75	10
3	5	2	1.50	10	5	1.0	1.50	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	6	2	1.00	12	6	1.2	1.00	10
3	2	1	0.75	4	2	0.4	0.75	10
3+50c	8	4	1.50	16	8	1.6	1.50	10
3	2	1	0.75	4	2	0.4	0.75	10
3	6	2	1.00	12	6	1.2	1.00	10
3	4	2	0.75	8	4	0.8	0.75	10
3	3.5	1.75	0.75	7	3.5	0.7	0.75	10
3	8	2	1.50	16	8	1.6	1.50	10
3	5	2	Rural 1.00	Rates 10	5	1	1.00	10
3	4.5	2	1.00	9	4.5	0.9	1.00	10
3	2	1	0.75	4	2	0.4	0.75	10
3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
3	2	1	0.75	3.5	1.75	0.35	0.75	10
3	4	2	1.00	8	4	0.8	1.00	10
3	4	2	1.00	8	4	0.8	1.00	10
3	6	2	1.00	12	6	1.2	1.00	10
3	3	1.5	1.00	6	3	0.6	0.75	10
3	6	2	1.00	12	6	1.2	1.00	10
3	9	2	1.50	18	9	1.8	1.50	10

STATEMENT

Lighting Rates in

Municipality	1921								
	Domestic				Commercial				Prompt Payment discount
	Service charge per 100 sq. ft.	1st 3 kw-hr per 100 sq. ft. per kw-hr	All additional per kw-hr	Minimum net monthly bill	1st 30 hr. per kw-hr	Next 70 hr. per kw-hr	All additional per kw-hr	Minimum net monthly bill	
	cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
Horning's Mills.....	3	7	3.5	.....	14	7	1.4	1.50	10
Huntsville.....	3	6	3	.....	12	6	1.2	1.00	10
Ingersoll.....	3	2	1	.....	4	2	0.4	0.75	10
Kemptville.....	3	6	3	.....	12	6	3	1.00	10
Kincardine.....	3	6	3	.....	12	6	3	1.00	10
Kingston.....	3	3.5	1.75	.....	7	3.5	0.4	0.75	10
Kirkfield.....	3	6	3	.....	12	6	1.2	1.50	10
Kitchener.....	3	2	1	.....	4	2.0	0.4	0.75	10
Lambeth.....	3	6	3	.....	12	6	1.2	1.25	10
Lanark.....	3	8	4	1.65	16	8	1.6	2.50	10
Lancaster.....	3	8	4	1.75	16	8	1.6	2.50	10
Listowel.....	3	4	2	.....	8	4	0.8	0.75	10
London.....	3	2	1	.....	4	2.0	0.4	0.75	10
Lucan.....	3	4	2	.....	8	4	0.8	0.75	10
Lucknow.....	3	7.5	3.75	.....	15	7.5	1.5	1.50	10
Lynden.....	3	4.5	2.25	.....	9	4.5	0.9	1.50	10
Markdale.....	3	4	2	.....	8	4	0.8	1.00	10
Markham.....	3	9	4.5	.....	18	9	1.8	1.00	10
Martintown.....	3	7	3.5	1.50	14	7	1.4	2.00	10
Maxville.....	3	8	4	1.50	16	8	1.6	1.50	10
Merritton.....	3	3	1.5	.....	6	3	0.6	0.75	10
Midland.....	3	3	1.5	.....	6	3	0.6	0.75	10
Milton.....	3	4	2	.....	8	4	0.8	0.75	10
Milverton.....	3	2	1	.....	4	2	0.4	0.75	10
Mimico.....	3	3	1.5	.....	6	3	0.6	0.75	10
Mitchell.....	3	7	3.5	.....	14	7	1.4	1.50	10
Moorefield.....	3	6	3	.....	12	6	1.2	1.25	10
Mount Brydges.....	3	5.5	2.75	.....	11	5.5	1.1	1.00	10
Mount Forest.....	3	7	3.5	.....	14	7	1.4	1.50	10
Neustadt.....	3	8	4	.....	16	8	1.6	1.00	10
Newbury.....	3	3	1.5	.....	6	3	0.6	0.75	10
New Hamburg.....	3	2	1	.....	4	2	0.4	0.75	10
New Toronto.....	3	2	1	.....	4	1.5	0.15	0.75	10
Niagara Falls.....	3	4	2	.....	8	4	0.8	0.75	10
Niagara-on-the-Lake.....	3	3	1.5	.....	6	3	0.6	0.75	10
Norwich.....	3	5	2.5	.....	10	5	1	1.00	10
Oil Springs.....	3	5	2.5	.....	10	5	1	1.00	10
Omamee.....	3	5	2.5	.....	10	5	1	1.00	10
Orangeville.....	3	2	1.5	.....	5	2.2	0.5	0.75	10
Ottawa.....	3	6	3	.....	12	6	1.2	0.75	10
Otterville.....	3	3	1.5	.....	6	3	0.6	0.75	10
Owen Sound.....	3	4	2	.....	8	4	0.8	0.75	10
Palmerston.....	3	2	1	.....	4	2	0.4	0.75	10
Paris.....	3	8	4	.....	16	8	1.6	1.50	10
Parkhill.....	3	8	4	.....	16	8	1.6	1.50	10

"G"—Continued

Hydro Municipalities

1922								
Domestic				Commercial				Prompt payment discount
Service charge per 100 sq. ft.	1st 3 kw- hr. per 100 sq. ft. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	1st 30 hr. per kw-hr.	Next 70 hr. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	
cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
3	7*	3.5	1.50	14	7	1.4	1.50	10
3	6	2	1.00	12	6	1.2	1.00	10
3	2	1	0.75	4	2	0.4	0.75	10
3	8	2	1.65	16	8	1.6	2.50	10
3	6	2	1.50	12	6	1.2	1.50	10
3	3.5	1.75	0.75	7	3.5	0.4	0.75	10
3	6	2	1.50	12	6	1.2	1.50	10
3	2	1	0.75	4	2	0.4	0.75	10
3	6	2	1.25	12	6	1.2	1.25	10
3	8	2	1.65	16	8	1.6	2.50	10
3	8	2	1.75	16	8	1.6	2.50	10
3	4	2	0.75	8	4	0.8	0.75	10
3	2	1	0.75	4	2	0.4	0.75	10
3	4	2	0.75	8	4	0.8	0.75	10
3	7.5	2	1.50	15	7.5	1.5	1.50	10
3	4.5	2	1.50	9	4.5	0.9	1.50	10
3	4	2	1.00	8	4	0.8	1.00	10
3	7	2	1.00	14	7	1.4	1.00	10
3	7	2	1.50	14	7	1.4	2.00	10
3	8	2	1.50	16	8	1.6	2.00	10
3	2	1	0.75	4	2	0.4	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	3.5	1.75	0.75	7	3.5	0.7	0.75	10
3	2	1	0.75	4	2	0.4	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	7	2	1.50	14	7	1.4	1.50	10
3	6	2	1.25	12	6	1.2	1.25	10
3	5.5	2	1.00	11	5.5	1.1	1.00	10
3	7	2	1.50	14	7	1.4	1.50	10
3	8	2	1.00	16	8	1.6	1.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	2	1	0.75	4	1.5	0.15	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	5	2	1.00	10	5	1	1.00	10
3	5	2	1.00	10	5	1	1.00	10
3	5	2	1.00	10	5	1	1.00	10
3	2	1.5	0.75	4	2	0.4	0.75	10
3	5	2	0.75	10	5	1	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	2	1	0.75	4	2	0.4	0.75	10
3	7	2	1.25	14	7	1.4	1.25	10

STATEMENT

Lighting Rates in

Municipality	1921								
	Domestic				Commercial				Prompt payment discount
	Service charge per 100 sq. ft.	1st 3 kw-hr per 100 sq. ft. per kw-hr	All additional per kw-hr	Minimum net monthly bill	1st 30 hr. per kw-hr	Next 70 hr. per kw-hr	All additional per kw-hr	Minimum net monthly bill	
	cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
Penetang.....	3	4	2	.....	8	4	0.8	1.00	10
Perth.....	3	5	2.5	.....	10	5	1	1.00	10
Peterboro.....	3	2.5	1.25	.....	5	2.5	0.5	0.75	10
Petersburg, ext.....	3	6	3	.....	12	6	1.2	1.00	10
Petrolia.....	3	4	2	.....	8	4	0.8	0.75	10
Plattsville.....	3	5	2.5	.....	10	5	1	1.00	10
Picton.....	3	6	3	.....	12	6	1.2	0.75	10
Port Arthur.....	3	2	1	.....	5	2.5	0.5	0.75	10
Port Colborne.....	3	4	2	.....	8	4	0.8	0.75	10
Port Credit.....	3	3	1.5	.....	6	3	0.6	0.75	10
Port Dalhousie.....	3	4.5	2.25	.....	9	4.5	0.9	0.75	10
Port Dover.....	3	6	3	.....	12	6	1.2	1.25	10
Port McNicoll.....	3	6	3	.....	12	6	1.2	1.25	10
Port Perry.....	3	3	1.5	.....	6	3	0.6	0.75	10
Port Robinson, ext.....	3	3	1.5	.....	6	3	0.6	0.75	10
Port Stanley.....	3	4	2	.....	8	4	0.8	0.75	10
Prescott.....	3	5	2.5	.....	10	5	1	1.25	10
Preston.....	3	2.5	1.25	.....	5	2.5	0.5	0.75	10
Priceville.....	3	6	3	.....	12	6	1.2	1.50	10
Princeton.....	3	7.5	3.75	.....	15	7.5	1.5	1.50	10
Queenston.....	3	3.5	1.75	.....	7	3.5	0.7	0.75	10
Ridgetown.....	3	3.5	1.75	.....	7	3.5	0.7	0.75	10
Ripley.....	3	7.5	3.75	.....	15	7.5	1.5	1.50	10
Riverside.....	3	5	2.5	.....	10	5	1	1.00	10
Rockwood.....	3	5	2.5	.....	10	5	1	1.00	10
Rodney.....	3	6	3	.....	12	6	1.2	0.75	10
St. Catharines.....	3	2	1	.....	4	1.5	0.15	0.75	10
St. Clair Beach.....	3	4	2	.....	8	4	8	1.00	10
St. George.....	3	4	2	.....	8	4	8	1.00	10
St. Jacobs.....	3	4	2	.....	8	4	8	1.00	10
St. Marys.....	3	3	1.5	.....	6	3	0.6	0.75	10
St. Thomas.....	3	2	1	.....	4	2	0.4	0.75	10
Sandwich.....	3	4	2	.....	8	4	0.8	0.75	10
Sarnia.....	3	3	1.5	.....	6	3	0.6	0.75	10
Scarboro Twp.....	3	5.5	2.75	.....	11	5.5	1.1	0.75	10
Seaforth.....	3	3	1.5	.....	6	3	0.6	0.75	10
Sebringville, ext.....	3	5	2.5	.....	10	5	1	0.75	10
Shelburne.....	3	5.5	2.75	.....	11	5.5	1.1	1.25	10
Simcoe.....	3	2.5	1.25	.....	5	2.5	0.5	0.75	10
Smiths Falls.....	3	5	2.5	.....	10	5	1	1.00	10
Springfield.....	3	7	3.5	.....	14	7	1.4	1.00	10
Stamford Twp.....	3	3	1.5	.....	6	3	0.6	0.75	10
Stayner.....	3	6	3	.....	12	6	1.2	1.00	10
Stratford.....	3	2	1	.....	4	2	0.4	0.75	10
Strathroy.....	3	3	1.5	.....	6	3	0.6	0.75	10

"G"—Continued

Hydro Municipalities

1922								
Domestic				Commercial				Prompt payment discount
Service charge per 100 sq. ft.	1st 3 kw- hr. per 100 sq. ft. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	1st 30 hr. per kw-hr.	Next 70 hr. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	
cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
3	4	2	1.00	8	4	0.8	1.00	10
3	5	2	1.00	10	5	1.0	1.00	10
3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	6	2	1.00	12	6	1.2	1.00	10
3	4	2	0.75	8	4	0.8	0.75	10
3	2	1	0.75	5	2.5	0.5	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
3	4.5	2	0.75	9	4.5	0.9	0.75	10
3	6	2	1.25	12	6	1.2	1.25	10
3	5	2	1.25	10	5	1	1.25	10
3	8	2	2.00	16	8	1.6	1.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	4	2	0.75	8	4	0.8	0.75	10
3	4	2	1.25	8	4	0.8	1.25	10
3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
3	7.5	2	1.50	15	7.5	1.5	1.50	10
3	7.5	2	1.50	15	7.5	1.5	1.50	10
3	2	1.5	1.25	6	3	0.6	1.25	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	7.5	2	1.50	15	7.5	1.5	1.50	10
3	5	2	0.75	10	5	1	0.75	10
3	4	2	1.00	8	4	0.8	1.00	10
3	5	2	0.75	10	5	1.0	0.75	10
3	2	1	0.75	3.5	1.75	0.35	0.75	10
3	7	2	2.00	14	7	1.4	2.00	10
3	4	2	1.00	8	4	0.8	1.00	10
3	4	2	1.00	8	4	0.8	1.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	2	1	0.75	4	2	0.4	0.75	10
3	4	2	0.75	8	4	0.8	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	5	2	0.75	10	5	1	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	5	2	0.75	10	5	1	0.75	10
3	5.5	2	1.25	11	5.5	1.1	1.25	10
3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
3	5	2	1.00	10	5	1	1.00	10
3	7	2	1.00	14	7	1.4	1.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	5	2	1.00	10	5	1	1.00	10
3	2	1	0.75	4	2	0.4	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10

STATEMENT

Lighting Rates in

Municipality	1921								
	Domestic				Commercial				Prompt payment discount
	Service charge per 100 sq. ft.	1st 3 kw-hr per 100 sq. ft. per kw-hr	All additional per kw-hr	Minimum net monthly bill	1st 30 hr. per kw-hr	Next 70 hr. per kw-hr	All additional per kw-hr	Minimum net monthly bill	
	cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
Sunderland.....	3	8	4	.....	16	8	1.6	1.50	10
Tara.....	3	8	4	.....	16	8	1.6	1.50	10
Tavistock.....	3	2.5	1.25	.....	5	2.5	0.5	1.00	10
Tecumseh, ext.....	3	5	2.5	.....	10	5	1	0.75	10
Teeswater.....	3	5	2.5	.....	10	5	1	1.50	10
Thamesford.....	3	6	3	.....	12	6	1.2	0.75	10
Thamesville.....	3	6	3	.....	12	6	1.2	1.00	10
Thedford.....	3	6.5	3.25	.....	13	6.5	1.3	1.00	10
Thorndale.....	3	7	3.5	.....	14	7	1.4	1.50	10
Thorold.....	3	5	2.5	.....	10	5	1	1.25	10
Tilbury.....	3	3	1.5	.....	6	3	0.6	0.75	10
Tillsonburg.....	3	2	1	.....	5	3	1	0.75	10
Toronto.....	1.50	4	2	.....	.....	.....	.....	.....	.....
Toronto Twp.....	3	8	4	.....	16	8	1.6	1.50	10
Tottenham.....	3	5	2.5	.....	10	5	1	1.00	10
Uxbridge.....	3	3	1.5	.....	6	3	0.6	0.75	10
Victoria Harbor.....	3	4	2	.....	8	4	0.8	0.75	10
Walkerville.....	3	3	1.5	.....	6	3	0.6	0.75	10
Wallaceburg.....	3	4	2	.....	8	4	0.8	0.75	10
Wardsville.....	3	3	1.5	.....	6	3	0.6	0.75	10
Waterdown.....	3	3	1.5	.....	6	3	0.6	0.75	10
Waterford.....	3	2	1	.....	4	2	0.4	0.75	10
Waterloo.....	3	7.5	3.75	.....	15	7.5	1.5	1.00	10
Watford.....	3	7	3.5	.....	14	7	1.4	1.25	10
Waubashene.....	3	2	1	.....	4	2	0.4	0.75	10
Welland.....	3	4	2	.....	8	4	0.8	1.00	10
Wellesley.....	3	6	3	.....	12	6	1.2	1.00	10
Wellington.....	3	4	2	.....	8	4	0.8	0.75	10
West Hamilton, ext.....	3	6	3	.....	12	6	1.2	0.75	10
West Lorne.....	3	2	1	.....	4	2	0.4	0.75	10
Weston.....	3	6	3	.....	12	6	1.2	1.50	10
Williamsburg.....	3	6	3	.....	12	6	1.2	1.50	10
Winchester.....	3	6	3	.....	12	6	1.2	1.50	10
Windsor.....	3	6	3	.....	12	6	1.2	1.50	10
Sandwich.....	‡3	3	1.5	.....	6	3	0.6	0.75	10
Wingham.....	3	6	3	.....	12	6	1.2	1.00	10
Woodbridge.....	3	3	1.5	.....	6	3	0.6	0.75	10
Woodstock.....	3	2	1	.....	4	2	0.4	0.75	10
Woodville.....	3	7	3.5	.....	14	7	1.4	1.50	10
Wyoming.....	3	7.5	3.75	.....	15	7.5	1.5	1.00	10
York Twp.....	3	3	1.5	.....	6	3	0.6	0.75	10
Zurich.....	3	6	3	.....	12	6	1.2	1.00	10

‡60 cycle lighting rates 25% higher.

1922								
Domestic				Commercial				
Service charge per 100 sq. ft.	1st 3 kw-hr. per 100 sq. ft. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	1st 30 hr. per kw-hr.	Next 70 hr. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	Prompt payment discount
cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
3	8	2	1.50	16	8	1.6	1.50	10
3	8	2	1.50	16	8	1.6	1.50	10
3	2.5	1.25	1.00	5	2.5	0.5	1.00	10
3	5	2	1.50	10	5	1	1.50	10
3	5	2	1.50	10	5	1	1.50	10
3	6	2	0.75	12	6	1.2	0.75	10
3	5	2	1.00	10	5	1	1.00	10
3	9	2	1.50	18	9	1.8	1.50	10
3	6.5	2	1.25	13	6.5	1.3	1.25	10
3	7	2	1.50	14	7	1.4	1.50	10
3	2	1	0.75	5	2	2.5	0.75	10
3	5	2	1.25	10	5	1	1.25	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	2	1	0.75	5	3	1.0	0.75	10
1.50	4	2	.	.	.	.	.	.
3	8	2	1.50	16	8	1.6	1.50	10
3	8	2	2.00	16	8	1.6	1.00	10
3	5	2	1.00	10	5	1	1.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	4	2	0.75	8	4	0.8	0.75	10
3	8	2	1.50	16	8	1.6	1.50	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	2	1	0.75	4	2	0.4	0.75	10
3	6	2	1.00	12	6	1.2	1.00	10
3	6	2	1.00	12	6	1.2	1.00	10
3	2	1	0.75	4	2	0.4	0.75	10
3	4	2	1.00	8	4	0.8	1.00	10
3	4	2	1.00	12	6	1.2	1.00	10
3	4	2	.....	8	4	0.8	0.75	10
3	5	2	0.75	10	5	1	0.75	10
3	2	1	0.75	4	2	0.4	0.75	10
3	6	2	1.50	12	6	1.2	1.50	10
3	6	2	1.50	12	6	1.2	1.50	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	6	2	1.00	12	6	1.2	1.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	2	1	0.75	4	2	0.4	0.75	10
3	7	2	1.50	14	7	1.4	1.50	10
3	7.5	2	1.00	15	7.5	1.5	1.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	6	2	1.25	12	6	1.2	1.25	10

APPENDIX I

ACTS

Chapter 31, 1922.

An Act to amend The Power Commission Act

Assented to 13th June, 1922.

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

1. This Act may be cited as *The Power Commission Act, 1922.* Short title.
2. Section 19 of *The Power Commission Act* as amended by subsection 1 of section 7 of *The Power Commission Act, 1917*, is further amended, Rev. Stat. c. 39, s. 19, amended. by adding thereto the following subsections:
 - (5) The trustees of a police village shall be a commission for the control and management of works established for the distribution of electrical power or energy in the police village, and shall have and may exercise and perform the like powers and duties as nearly as may be as a commission formed under *The Public Utilities Act* in an incorporated village. Trustees, duties and powers of. Rev. Stat c. 204.
 - (6) The trustees of a police village shall appoint a competent person to act as secretary-treasurer for the purpose of keeping the accounts of the trustees for the distribution and supply of electrical power or energy and acting as custodian of funds collected by the trustees or received by them from the treasurer of the township for the establishment of works in connection with the distribution of power. Secretary-treasurer.
 - (7) The secretary-treasurer shall give security for the due accounting of all sums of money coming to his hands and for the payment over to the township treasurer of the sums required from time to time to meet payments coming due for interest and to provide a sinking fund for the payment of any debentures issued for the works undertaken by the trustees under contract with the Commission. Security.
 - (8) The accounts of the secretary-treasurer shall be audited by the auditor of the township in which the police village is situate, or if the police village includes parts of two or more townships, then by the auditor of that township having the highest assessment in the police village. Auditing of accounts.
3. Subsection 4 of section 19a of *The Power Commission Act* as enacted by section 8 of *The Power Commission Act, 1917*, is amended by striking out the word "appoint" in the first line and substituting therefor the word "establish," and by striking out the word "appoint- Rev. Stat. c. 39, s. 19a, (1917, c. 20, s. 8) amended.

ed" in the sixth line and substituting the word "elected," so that the subsection will now read as follows:

- (4) The council may establish a commission for the purpose of the construction of the works and the control and management of the same for the district so set apart, in the manner provided by section 34 of *The Public Utilities Act*, but the commissioners elected shall be residents of such district and it shall not be necessary to obtain the assent of the electors to the establishment of the commission.

Rev. Stat.
c. 204.

Rev. Stat.
c. 39,
s. 30e (1920,
c. 18, s. 5)
repealed.

Rural power
districts.

4.—(1) Section 30e of *The Power Commission Act* as enacted by section 5 of *The Power Commission Act, 1920*, is repealed and the following substituted therefor:

30e. Subject to the approval of the Lieutenant-Governor in Council the Commission may enter into a contract with the municipal corporation of a township, or with the municipal corporations of two or more townships, for the supply or distribution of electrical power or energy in the township or townships, and the Commission may with the approval of the municipal corporation and in pursuance of such contract lay out and define areas hereinafter called "rural power districts" in the township or townships for the distribution of electrical power or energy, and may construct and operate all works necessary for the transmission of electrical power or energy to a rural power district and for the transforming and distributing of such electrical power or energy to the premises of persons within the rural power district, and the Commission may from time to time with the approval of the municipal corporation enlarge, alter or vary the boundaries of any rural power district.

(2) The amendment made by this section shall have effect as from the 4th day of June, 1920.

By-laws
confirmed.

5. By-law No. 737 of the Corporation of the Township of Elizabethtown; By-law No. 678 of the Corporation of the Township of Beverley; By-law No. 990 of the Corporation of the Township of Yarmouth; By-law No. 1482 of the Corporation of the Township of Raleigh; By-law No. 591 of the Corporation of the Township of North Dorchester; By-law No. 810 of the Corporation of the Township of Westminster; By-law No. 18 of the Corporation of the Township of Charlottenburg; By-law No. 381 of the Corporation of the Township of West Nissouri; By-law No. 211a of the Corporation of the Township of South Dorchester; By-law No. 789 of the Corporation of the Township of Brantford; By-law No. 675 of the Corporation of the Township of Nottawasaga; By-law No. 18 of 1921 of the Corporation of the Township of Howard; By-law No. 200 of the Corporation of the Township of Thorold; By-law No. 701 of the Corporation of the Township of Orford; By-law No. 916 of the Corporation of the Township of Nepean; By-law No. 952 of the Corporation of the Township of Edwardsburg; By-law No. 861 of the Corporation of the Township of Augusta; By-law No. 8 of the Corporation of the Township of North Oxford; By-law No. 815 of the Corporation of the Township of Willoughby; By-law No. 95 of the Corporation of the Township of East Nissouri; By-

law No. 46 of the Corporation of the Township of Crowland; By-law No. 2350 of the Corporation of the Township of Harwich; By-law No. 17 of 1921 of the Corporation of the Township of Artemesia; By-law No. 952 of the Corporation of the Township of Bertie; By-law No. 56 of 1921 of the Corporation of the Township of Stamford; By-law No. 118 of 1921 of the Corporation of the Township of Kinloss; By-law No. 1012 of the Corporation of the Township of Chatham; By-law No. 875 of the Corporation of the Township of Sandwich East; By-laws Nos. 388 and 412 of the Corporation of the Village of Kemptville; By-law No. 174 of the Corporation of the Village of Port Dover; By-laws Nos. 241 and 242 of the Corporation of the Village of Wardsville; By-laws Nos. 167 and 168 of the Corporation of the Village of Thedford; By-laws Nos. 3 and 4 of 1921 of the Corporation of the Village of Alvinston; By-laws Nos. 558 and 562 of the Corporation of the Township of Niagara; By-laws Nos. 934 and 937 of the Corporation of the Township of Toronto; By-laws Nos. 1090, 1091, 1092, 1093 and 1094 of the Corporation of the Township of Scarborough; By-law No. 104 of the Corporation of the Town of Tilbury; By-law No. 2 of the Police Village of Merlin; and By-law No. 392 of the Corporation of the Town of Mimico, and all debentures issued or to be issued or purporting to be issued, under any of the said by-laws which authorize the issue of debentures, are confirmed and declared to be legal, valid and binding upon such corporations and the rate-payers thereof, respectively, and shall not be open to question upon any ground whatsoever, notwithstanding the requirements of *The Power Commission Act*, or the amendments thereto, or any other Act of this Legislature.

6. This Act shall come into force on the day upon which it receives the Royal Assent. Commence-
ment of Act.

Chapter 32, 1922.

An Act to amend The Rural Hydro-Electric Distribution Act, 1921

Assented to 13th June, 1922.

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

1. This Act may be cited as *The Rural Hydro-Electric Distribution Act, 1922*. Short title.

2. *The Rural Hydro-Electric Distribution Act, 1921* is amended by adding the following as section 4a; 1921, c. 21,
amended.

4a. Where the corporation of a township or of an urban municipality supplies or distributes electrical power or energy within any such Rural Power District there may be paid to such corporation upon the recommendation of the Hydro-Electric Power Commission of Ontario, and the Order of the Lieutenant-Governor in Council a sum not exceeding fifty per cent. of the capital cost of constructing and erect- Payment o
grant where
municipality
is distributor
of power.

ing in the Rural Power District primary transmission lines and cables required for the delivery of power or energy in such Rural Power District.

Payments
may be
retroactive.

3. The payments and allowances authorized by section 4 of *The Rural Hydro-Electric Distribution Act, 1921*, and by section 4a of the said Act as enacted by section 2 of this Act, may be made in respect of works constructed before or since the 1st day of June, 1921.

Commence-
ment of
Act.

4. This Act shall come into force and take effect on the day upon which it receives the Royal Assent.

Chapter 33, 1922.

An Act respecting the Filing of Claims against Certain Companies or their Properties

Assented to 13th June, 1922.

Preamble.

WHEREAS The Hydro-Electric Power Commission of Ontario, (hereinafter referred to as "the Commission") proposes to enter into an agreement (hereinafter referred to as the "Purchase Agreement") with The Toronto Railway Company, (hereinafter referred to as "the Railway Company") for the purchase of all of the shares of the capital stock of The Toronto Power Company, Limited, The Toronto & York Radial Railway Company, and the Schomberg and Aurora Railway Company, the shares of The Toronto Power Company, Limited, carrying with them the ownership of substantially all of the shares of The Electrical Development Company of Ontario, Limited, The Toronto and Niagara Power Company and The Toronto Electric Light Company, Limited; and whereas it is essential to the making and carrying out of the said agreement that all persons asserting any right or claim against any of the said companies other than the Railway Company, or against any of their properties, arising before the 1st day of December, 1920, being the date as of which the said purchase is to become effective, shall disclose the same to the Commission, as hereinafter provided, so that due provision for the discharge, settlement or other disposition thereof may be made before the final adjustment of accounts between the Commission and the Railway Company; and whereas by reason of the guarantees to be given by His Majesty the King on behalf of the Province of Ontario in connection with said purchase, it is expedient in the public interest that this Act be passed;

Therefore His Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

Publication
of notice
requiring
filing of
claims.

1. The Commission and the Railway Company shall cause advertisements substantially in the form set out in schedule "A" to this Act to be inserted five times in two daily newspapers published in the City of Toronto, in one daily newspaper published in the City of Montreal, in one daily newspaper published in the City of Winnipeg, in one daily newspaper published in the City of London, England, and in one

daily newspaper published in the City of New York in the United States of America, the newspapers and the dates of publication therein respectively of the said advertisement to be designated by the Lieutenant-Governor in Council.

2. Any right or claim, other than those referred to in the next succeeding section, held or asserted by any person against the Toronto Power Company, Limited, The Electrical Development Company of Ontario, Limited, The Toronto and Niagara Power Company, The Toronto Electric Light Company, Limited, The Toronto and York Radial Railway Company, or the Schomberg and Aurora Railway Company or any of them or against any of their properties arising before the First day of December, 1920, and whether cause of action had or had not accrued in respect of such right or claim by the said date, of which notice in writing shall not have been given to the Commission in the manner and within the time provided in the advertisements to be published pursuant to Section 1 of this Act, shall, as against the said companies and their properties, be forever barred. Provided, however, that this section shall not bar any such right or claim of which notice shall not have been given as herein provided to the Commission but of which the Commission shall have given notice to the Railway Company as provided in the agreement set out in Schedule "J" to the purchase agreement.

Claims
barred if
not filed by
certain date.

3. This Act shall not apply to rights or claims arising out of any of the bonds, debenture stock or notes specified below, including any rights or claims of any trustee under any deed or deeds of trust securing the same.

Act not to
apply to
certain
liabilities.

- (a) Toronto and Niagara Power Company, 1st Mortgage 5% bonds secured by trust deed to National Trust Company, Limited, dated 1st March, 1903, total outstanding 1st December, 1920, \$1,500,000.
- (b) Electrical Development Company, 1st Mortgage 5% bonds secured by trust deed to National Trust Company, Limited, dated 1st March, 1903, total outstanding 1st December, 1920, \$9,349,000.
- (c) Toronto Power Company, Limited, 1st Mortgage 4½% Debenture stock secured by trust deed to the British Empire Trust Company, Limited, dated 27th July, 1911, total outstanding 1st December, 1920, £2,786,079, and any debenture stock of the said company secured by trust deed to the said the British Empire Trust Company, Limited, issued in exchange therefor.
- (d) Toronto Power Company, Limited, 1st Mortgage bonds secured by trust deed to National Trust Company, Limited, dated 1st July, 1914, total outstanding, 1st December, 1920, \$4,103,200.
- (e) (1) Toronto Electric Light Company, Limited, 1st Mortgage bonds secured by trust deed to National Trust Company, Limited, dated 11th March, 1919, total outstanding, 1st December, 1920, \$1,000,000.

(2) Toronto Electric Light Company, Limited, 2nd Mortgage bonds secured by trust deed to National Trust Company, Limited, dated 11th March, 1919, total outstanding, 1st December, 1920, \$3,000,000.

(3) Toronto Electric Light Company, Limited, 6% 3-Year Promissory Notes, secured by collateral trust deed to National Trust Company, Limited, dated 1st July, 1919, total outstanding, 1st December, 1920, \$850,000.

Commence-
ment of
action for
enforcement
of claim.

4. If with respect to any right or claim of which notice in writing shall have been given to the Commission in the manner and within the time provided in the advertisements to be published pursuant to section 1 of this Act, or to the Railway Company by the Commission in accordance with the proviso to Section 2 of this Act, cause of action shall have arisen, or right to arbitrate shall have accrued before the 1st day of April, 1923, the person having or asserting such right or claim shall institute an action or arbitration proceedings as the case may require to enforce such right or claim and give notice thereof in writing to the Company against which or against whose property such right or claim exists or is asserted, on or before the 1st day of October, 1923, failing which such right or claim as against the afore-said Company or Companies and against its or their properties shall be forever barred; provided, however, that this section shall not apply to any such right or claim referred to in the proviso to Section 2 of this Act, unless the Railway Company shall, before the 1st day of July, 1923, have notified the person asserting such claim of the provisions of this section, by written notice mailed to such address as has been furnished by the Commission to the Railway Company with any notice given under the said proviso, or if no such address has been given, then by advertisement on two consecutive days in *The Globe* and *The Mail and Empire*, published in the City of Toronto.

5. Nothing herein contained shall:—

(a) revive any right or claim against any of the said companies or their properties which or the remedy for the enforcement of which has been already barred by any statute in force in this Province, or

(b) extend the period of limitation fixed by any statute in force in this Province for the enforcement of any such right or claim.

Act not to
revive claims
already barred.

Date when
Act takes
effect.

6. This Act shall come into force on the day upon which it receives the Royal Assent.

SCHEDULE "A"

The Toronto Power Company, Limited.
The Electrical Development Company of Ontario, Limited.
The Toronto and Niagara Power Company.
The Toronto Electric Light Company, Limited.
The Toronto & York Radial Railway Company.
The Schomberg and Aurora Railway Company.

1. Notice is hereby given pursuant to the Statute 12-13 George V, Chapter 33, (Ontario) that all persons, firms and corporations having or asserting any right or claim against any of the above-named companies or against any of their properties, arising prior to the 1st of December,

1920, and whether cause of action had or had not accrued in respect of such right or claim by the said date, other than the rights or claims referred to in the next paragraph are hereby required to give notice in writing of such right or claim with precise and definite particulars thereof to the Hydro-Electric Power Commission of Ontario at its head office, University Avenue, in the City of Toronto, not later than the 1st April, 1923, failing which such right or claim shall as against the aforesaid companies and against their properties be forever barred, unless the Commission shall itself have given notice of such claim to the Toronto Railway Company, pursuant to the proviso to section 2 of the said Statute.

2. Holders of any of the bonds, debenture stock or notes specified below need not give any notice as aforesaid in respect thereof, nor need any trustee under any deed or deeds of trust securing any of the said bonds, debenture stock or notes give notice of any right or claim arising thereunder as they are expressly excluded from the operation of the said statute.

(a) Toronto and Niagara Power Company, 1st Mortgage 5% bonds secured by trust deed to National Trust Company, Limited, dated 1st of March, 1903, total outstanding 1st of December, 1920, \$1,500,000.

(b) Electrical Development Company, 1st Mortgage 5% bonds secured by trust deed to National Trust Company, Limited, dated 1st of March, 1903, total outstanding 1st December, 1920, \$9,349,000.

(c) Toronto Power Company, Limited, 1st Mortgage 4½% debenture stock secured by trust deed to The British Empire Trust Company, Limited, dated 27th of July, 1911, total outstanding 1st of December, 1920, £2,786,079, and any debenture stock of the said company secured by trust deed to the said The British Empire Trust Company, Limited, issued in exchange therefor.

(d) Toronto Power Company, Limited, 1st Mortgage bonds secured by trust deed to National Trust Company, Limited, dated 1st July, 1914, total outstanding 1st December, 1920, \$4,103,200.

(e) (1) Toronto Electric Light Company, Limited, 1st Mortgage bonds secured by trust deed to National Trust Company, Limited, dated 11th March, 1919, total outstanding 1st December, 1920, \$1,000,000.

(2) Toronto Electric Light Company, Limited, 2nd Mortgage bonds secured by trust deed to National Trust Company, Limited, dated 11th March, 1919, total outstanding 1st December, 1920, \$3,000,000.

(3) Toronto Electric Light Company, Limited, 6% 3-Year Promissory Notes, secured by collateral trust deed to National Trust Company, Limited, dated 1st July, 1919, total outstanding 1st December, 1920, \$850,000.

3. And notice is further given that if any such right or claim of which notice shall have been given to the Commission or by the Commission to the Toronto Railway Company as provided in paragraph (1) hereof and in respect of which cause of action shall have arisen or right to arbitrate shall have accrued before the 1st day of April, 1923, is not meantime paid or otherwise satisfied, the person having or asserting such right or claim to preserve his right or claim must institute an action or arbitration proceedings as the case may require to enforce such right or claim and give notice thereof to the Company or Companies against which or against whose property such right or claim exists or is asserted on or before the 1st day of October, 1923, failing which such right or claim will as against the aforesaid Company or Companies, and against its or their properties be forever barred as is provided in the said Statute.

Dated at the City of Toronto, in the Province of Ontario
this day of 1922.

The Hydro-Electric Power Commission of Ontario.
The Toronto Railway Company

Chapter 34, 1922.

An Act respecting the Purchase by the County of York of the Assets of Certain Companies

Assented to 13th June, 1922.

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

1. This Act may be cited as *The County of York Radial Railway Act, 1922.* ^{Short title}

County
authorized
to purchase
distribution
plants and
certain
railways.

2. The Municipal Corporation of the County of York is authorized to purchase all tracks, poles, lines, works, distribution systems, shares, securities, property and other assets of the Toronto Power Company, Limited (formerly called the Toronto and Mimico Railway Company), The Toronto and York Radial Railway Company, The Schomberg and Aurora Railway Company, The Toronto and Scarboro Electric Railway, Light and Power Company and the Metropolitan Railway Company.

Approval of
Agreement.

3. The agreement or agreements for the purchase of the properties mentioned shall be subject to approval by by-law of the Council of the Municipal Corporation of the County of York and when so approved shall be signed by the warden of the said county and by the treasurer thereof and the said treasurer shall affix the seal of the said corporation thereto.

Debentures
for four
million
dollars
authorized.

4. The Municipal Corporation of the County of York is authorized to issue debentures of the said county to a total amount not exceeding four million dollars dated and payable in forty years from the said date with interest thereon payable half yearly at the rate of five and one-half per cent. per annum, and to deliver the same in payment of the price of the properties purchased.

Application
of revenue
to sinking
fund for
retirement
of
debentures.

5. For the purpose of providing for the payment of such debentures and the interest thereon, the corporation shall in each year after the expiration of ten years from the said date out of the revenue of the railway after payment of working or operating expenses including the supply of electrical power or energy and the cost of administration and annual charges for interest set aside annually such sums as may be necessary to provide a sinking fund on a basis of not more than thirty years, which shall be held for and applied for the payment of such debentures or any renewals thereof at maturity and the corporation shall have power from time to time to issue debentures under the provisions of this Act for the purpose of providing for such additional monies as may be necessary with the accumulating sinking fund on hand to repay the debentures previously issued when the same respectively mature; provided that the sum so set aside for sinking fund shall be sufficient to provide for payment of all the debentures issued on account of the said Railway within forty years from the said date.

Assent of
electors not
required.

6. It shall not be necessary to submit any by-law for the issue of debentures under this Act to the electors of the said county qualified to vote on money by-laws or to observe any of the formalities in relation thereto prescribed by *The Municipal Act* and the said debentures shall not be included as part of the debt of the Municipal Corporation of the County of York in estimating the limits of its borrowing powers.

Operation
of property
by
Municipality.

7. The property acquired by the Municipal Corporation of the County of York under section 1 shall be controlled and operated by the said municipal corporation.

Date of
commence-
ment of
Act.

8. This Act shall not come into force or take effect until so declared by Proclamation of the Lieutenant-Governor in Council.

Chapter 35, 1922.

An Act to authorize the purchase and operation of the Toronto Suburban Railway Company by the Hydro-Electric Power Commission of Ontario on behalf of the City of Toronto

Assented to 13th June, 1922.

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

1. This Act may be cited as *The Toronto Suburban Railway Company Act, 1922.* Short title.

2. In this Act:—

Interpretation

(a) "Commission" shall mean the Hydro-Electric Power Commission of Ontario. "Commission."

(b) "Corporation" shall mean the Municipal Corporation of the City of Toronto. "Corporation."

(c) "Railway" shall mean the Toronto Suburban Railway Company. "Railway."

3. On behalf of the Corporation and any other Municipal Corporations which may become parties to any agreement entered into for that purpose the Commission may purchase and acquire and the Railway may sell the property and rights of the Railway and / or the Commission may purchase and acquire the shares and securities of the Railway from the owner or holder thereof and all the powers, rights and privileges of the Railway shall continue and shall be enjoyed and exercisable by the Commission acting on behalf of the Corporation and / or the said other Municipal Corporations. Power of Commission to purchase Railway.

4. Upon the completion of the said purchase the Railway shall be vested in the Commission on behalf of the Corporation, free from encumbrances, charges and liabilities, subject only to the agreement to be entered into under the authority of Section 5 and to a Mortgage Deed of Trust from the Railway to the British Empire Trust Company, Limited, dated 15th July, 1911, securing debenture stock of the Railway and nothing in this Act contained shall in any way affect or alter the rights of the Trustees under the said Mortgage Deed of Trust. Vesting of the railway in Commission.

5. The Commission and the Corporation are authorized to enter into an agreement as of 1st January, 1922, in the form set out in Schedule "A" to this Act or with such variations thereof as may be approved by the Lieutenant-Governor in Council, and to execute the same, and the said agreement shall be approved of by by-law of the Municipal Council of the Corporation, and when so approved, shall be signed by the Mayor of the Corporation and by the Clerk thereof, and the Clerk shall affix the Seal of the Corporation thereto, and when so executed the said agreement shall be legal, valid and binding upon the Corporation and the rate-payers thereof, and upon the Commission, anything in any general or special Act of this Legislature or in any by-law passed under any such Act to the contrary notwithstanding. Powers of Commission and Corporation to make agreement.

Railway to be controlled, equipped, etc., by Commission.

6. The Railway so acquired shall be equipped, maintained and operated by the Commission on behalf of the Corporation of the City of Toronto and such other Municipal Corporations as may become parties to such agreement, and the Commission shall have and may exercise the like powers and shall be under the same duties and obligations with respect to the said properties as in the case of a railway acquired, constructed, equipped and operated by the Commission under *The Hydro-Electric Railway Act, 1914*, provided that the Commission, subject as aforesaid, may dispose of any property not required for the purpose of the said Railway, and may use or dispose of the whole or part of the proceeds thereof in expenditures on capital account or may invest the whole or part thereof in securities of the Province of Ontario.

Agreements with municipal corporations.

7.—(1) The Commission and the Corporation may agree with any municipal corporation through which the said railway passes or in which a part of the said railway is situate, for the admission of such municipal corporation as a party to the agreement for the acquisition and operation of the said railway or for the extension thereof in or through the territory of such municipal corporation upon such terms and conditions and subject to such contributions as if it were a party to the agreement mentioned in Section 5 at the date hereof, but no such agreement shall be entered into until the same shall have been approved by the Lieutenant-Governor in Council and submitted to the municipal electors of the municipal corporation or corporations to be added as parties to the said agreement as provided by *The Hydro-Electric Railway Act, 1914*, with respect to an agreement for the construction or acquisition and operation of a railway by the Commission.

Agreements to provide for issue of debentures.

(2) Every such agreement shall provide for the issue of debentures by any such municipal corporation either in substitution for, or in addition to the debentures deposited with the Commission by the Corporation under Section 10 hereof, and upon the execution thereof the agreement mentioned in Section 5 shall be modified accordingly and shall remain in full force and effect subject only to such modifications.

Assent of electors not required.

(3) It shall not be necessary to submit any by-law for the issue of such debentures for the assent of the electors or observe any of the formalities provided by *The Municipal Act*.

Limit of purchase price.

8.—(1) The acquisition by the Commission of the Railway shall be subject to the amount due under the said Mortgage Deed of Trust securing the said debenture stock of the railway, as of 1st January, 1922, and the Commission may issue bonds dated 1st January, 1922, bearing interest at a rate not exceeding 6 per cent. per annum, payable half-yearly and maturing fifty years from said date, for a sum representing the difference between the said amount and the sum of \$2,778,000.

Purchase by City of Toronto of portion within city limits.

(2) The Commission may transfer to the Corporation and the Corporation may purchase those portions of the railway within the limits of the Corporation and for such purpose the Corporation may issue and deliver to the Commission its debentures to the amount of \$202,800, dated 1st January, 1922, bearing interest at a rate not to exceed six per cent. per annum, payable half-yearly and maturing fifty years from the said date, as provided in the said agreement, and the Com-

mission, subject as aforesaid, may apply the said debentures or the proceeds thereof for betterments on and additional equipment for said Railway.

(3) The Commission, with the consent of the Corporation, may from time to time increase the said bond issue as deemed necessary to cover the capital cost of extensions or improvements or additional works or equipment of any kind required for the railway.

Increase of bond issue.

(4) For the purpose of providing for the payment of such bonds and the interest thereon the Commission shall, in each year after the expiration of ten years from the said date, out of the revenue of the railway, after payment of working or operating expenses, including the supply of electrical power or energy and the cost of administration and annual charges for interest, set aside annually such sums as may be necessary to provide a sinking fund, on the basis of not more than forty years for the payment of all the bonds which shall be held for and applied toward the payment of such bonds or any renewals thereof, at maturity and the Commission shall have power from time to time to issue bonds, under the provisions of this Act, for the purpose of providing for such additional moneys as may be necessary with the accumulated sinking fund on hand, to repay the bonds previously issued, when the same respectively mature. Provided that the sum so set aside for sinking fund shall be sufficient to provide for payment of all the bonds issued on account of the said railway within fifty years from the first day of January, 1922.

Application of revenue to sinking fund for retirement of bonds.

9. Subject to the provisions of this Act and to the terms of the said agreement, the provisions of *The Hydro-Electric Railway Act, 1914*, and amendments thereto, except section 8 of the said Act, shall *mutatis mutandis* apply to the acquisition, construction, equipment and operation of the said railway, as in the case of a railway constructed or acquired by the Hydro-Electric Power Commission of Ontario under the provisions of *The Hydro-Electric Railway Act, 1914*.

Application of 1914, c. 31, as to acquisition, construction, etc., of the railway.

10.—(1) The Corporation is authorized to issue debentures to the amount required by paragraph 2 (b) of the said agreement, payable in fifty years from the 1st day of January, 1922, and bearing interest at a rate not exceeding six per cent. per annum, payable half-yearly.

Debentures, how payable.

(2) Upon the execution of the said agreement the Corporation shall issue and deposit the said debentures with the Commission, and is further authorized to and shall, from time to time thereafter, upon the requisition in writing of the Commission, issue and deposit with the Commission further similar debentures for the same amount as any increase of the bond issue of the Commission to cover the capital cost of extensions, improvements or additional works or equipment of the said railway, as provided in subsection 4 of section 8.

Deposit of debentures with the Commission.

(3) In the event of the revenue derived from the operation of the railway being insufficient in any year to meet the operating or working expenses, including electrical power or energy and the cost of administration and the annual charges for the interest and sinking fund on the bonds and of the renewal of any works belonging in whole or in part to the railway, such deficit shall be paid on demand of the Commission by the Corporation. Any arrears of the Corporation shall

Where revenue insufficient.

bear interest at a rate not exceeding six per cent. per annum. If the Corporation shall make default in payment of any such deficit the Commission shall thereupon, subject to subsection (5) hereof, sell or otherwise dispose of so much of the debentures of the Corporation as shall be necessary to supply such deficiency at such rates of discount or premium and on such terms and conditions as the Commission in its sole discretion shall deem to be in the interests of the railway, the proceeds of such debentures being used solely for the purposes herein contained.

Deposit of
debentures
to make up
deficiency.

(4) If the remaining debentures are insufficient in the opinion of the Commission to meet all payments required to be made by the Corporation under this Act or the said agreement, the Corporation is hereby authorized to and shall issue and deposit forthwith with the Commission similar debentures to an amount sufficient in the opinion of the Commission to make up the deficiency.

Debentures
to be
collateral
security for
bonds.

(5) All debentures issued and deposited with the Commission under this section shall be held by the Commission as collateral security for the bonds issued by the Commission under section 8, and for any payments required to be made by the Corporation under this Act or the said agreement, or the Commission may lodge the said debentures, or any of them, with and/or hypothecate the same to a Trust Company as Trustee for the holders of bonds of the Commission and for such purpose the Commission may enter into, execute and deliver any agreement, charge, trust indenture or other document containing such powers, terms and conditions as the Commission in its sole discretion shall deem to be in the best interests of the railway, anything contained herein or in any Statute or agreement to the contrary notwithstanding.

Assent of
electors to
by-law not
necessary.

Debentures
not to be
included
in debt of
Corporation.

(6) It shall not be necessary to obtain the assent of the electors to any by-law for the issue of any debentures authorized to be issued by the Corporation under this Act, and such debentures shall not be included as part of the debt of the Corporation in estimating the limits of its borrowing powers.

Agreement
for extensions.

11. The Commission with the consent of the Corporation expressed by by-law which may be passed without the assent of the electors may enter into an agreement with the Corporation of any adjacent municipality for the extension of the railway into such adjacent municipality and the council of such adjacent municipality shall submit to the vote of the electors qualified to vote on money by-laws a by-law approving of the agreement and directing its execution and for borrowing the money by the issue of debentures to pay its share of the cost of such extension.

Commence-
ment of Act.

12. This Act shall come into force on the day upon which it receives the Royal Assent.

SCHEDULE "A"

This Indenture made the _____ day of _____ in the year of our Lord, one thousand nine hundred and _____,
BETWEEN:

The Hydro-Electric Power Commission of Ontario, hereinafter called the "Commission,"
of the first part,

and

The Corporation of the City of Toronto, hereinafter called the "Corporation," of the second part.

Whereas, the Commission has acquired for and on behalf of the Corporation the shares, securities and / or property and rights of the Toronto Suburban Railway Company and hereinafter called the "Railway" to be controlled, equipped, improved and operated under the terms of The Hydro-Electric Railway Act, 1914.

And whereas the Corporation has requested the Commission to equip, improve and operate and the Commission has agreed with the Corporation on behalf of the Corporation to equip, improve and operate the railway upon the terms and conditions and in the manner herein set forth; but upon the express condition that the Commission shall not in any way be liable for any financial or other obligation or loss whatsoever by virtue of this agreement or arising out of the performance of the terms thereof;

And whereas the Corporation has issued debentures for the amount set forth in clause 2 (b) hereof, and has deposited the said debentures with the Commission:

Now, therefore, this indenture witnesseth:

1. In consideration of the premises and of the agreement of the Corporation herein contained, and subject to the provisions of the said Act and amendments thereto, the Commission agrees with the Corporation,

(a) To acquire, equip, improve and operate the railway on behalf of the corporation, subject to paragraph (n) of Clause 1 and to clauses 11 and 12 hereof, and it is hereby declared that it shall be lawful and the Commission is hereby authorized, as part of and incidental to the operation of the said railway;

(b) To acquire the railway subject to the amount due under a Mortgage Deed of Trust from the railway to the British Empire Trust Company, Limited, dated the 15th July, 1911, securing debenture stock of the railway, and to issue bonds as provided in paragraph three hereof,

(c) To furnish as far as possible first-class modern and standard equipment for use on the railway, to operate this equipment so as to give the best service and accommodation possible, having regard to the district served, the type of construction and equipment adopted and all other equitable conditions, and to exercise all due skill and diligence so as to secure the most effective operation and service of the railway consistent with good management;

(d) To regulate and fix the fares and rates of toll to be collected by the railway for all classes of service;

(e) To utilize the routes and property of the railway for all purposes from which it is possible to obtain a profit;

(f) To combine the property and works of the railway and the power lines of the Commission where combination is feasible and may prove economical to both the railway and users of the power lines;

(g) To permit and obtain interchange of traffic with other railways wherever possible and profitable, subject to the terms of an agreement with The Canadian National Railways, provided, always, and it is hereby agreed, that the Commission will not operate any of the trams, cars or other rolling stock of the said railway on any highway within the limits of the City of Toronto, without first obtaining the consent of the Corporation;

(h) To supply electrical power or energy for operation of the railway at rates consistent with those charged to municipal corporations;

(i) To apportion annually the capital costs and the operating expenses of all works, apparatus and plant used by the railway in common with the Commission's transmission lines, in a fair manner, having regard to the services furnished by the expenditure under consideration;

(j) To apply the revenue derived from operation of the railway and any other revenue derived from the undertaking to the payment of operating or working expenses, including the supply of electrical power or energy, and the cost of administration and annual charges for interest and sinking fund on the money invested, and such other deductions as are herein provided for;

(k) To set aside from any revenue thereafter remaining an annual sum for the renewal of any works belonging in whole or in part to the undertaking;

(l) To take active steps for the purpose of taking over, equipping and operating the railway at the earliest possible date after the execution of this agreement by the Corporation and the deposit of the debentures as called for under clause 2 (b) hereof;

(m) To pay over annually to the Corporation, if deemed advisable by the Commission in the interests of the undertaking, any surplus that may remain after providing for the items above mentioned;

(n) To transfer to the Corporation those portions of the said railway within the limits of the Corporation upon the Corporation issuing and delivering to the Commission debentures to the amount of \$202,800 as provided by paragraph (f) of clause 2 hereof;

2. In consideration of the premises and of the agreements herein set forth the Corporation agrees with the Commission;

(a) To bear as hereinafter provided the cost of acquiring, equipping, operating, maintaining, repairing, improving and insuring the railway and its property and works as established by the Commission;

(b) To issue debentures to an amount of \$2,778,000 maturing in 50 years from January 1st, 1922, and bearing interest at a rate not exceeding 6 per centum per annum payable half-yearly at the office of the City Treasurer in the City of Toronto, Ontario, which shall be deposited with the Commission previous to the acquisition of the railway.

(c) To make no agreement or arrangement with, and to grant no bonus, license or other inducement to any other railway or transportation company without the written consent of the Commission.

(d) To keep, observe and perform the covenants, provisos and conditions set forth in this agreement intended to be kept and observed and performed by the Corporation, and to execute such further or other documents, and to pass such by-laws as may be requested by the Commission for the purpose of fully effectuating the objects and intent of this agreement;

(e) To furnish a free right of way for the railway and for the power lines of the Commission over any property of the Corporation upon being requested by the Commission, and to execute such conveyance thereof or agreement with regard thereto as may be desired by the Commission;

(f) To issue debentures to the amount of \$202,800, maturing in 50 years from January 1st, 1922, and bearing interest at a rate not exceeding 6 per centum per annum payable half-yearly at the office of the City Treasurer in the City of Toronto, Ontario, which shall be delivered to the Commission in payment for the transfer of those portions of the said railway within the limits of the Corporation as provided in paragraph (n) of clause 1 hereof;

3. It shall be lawful and the Commission is hereby authorized to acquire the railway subject to the amount due (hereinafter called the obligation) under a mortgage deed of trust from the railway to The British Empire Trust Co., Ltd., dated 15th July, 1911, securing debenture stock of the railway, and to create an issue of bonds to be charged upon and secured by the railway and its undertaking, and all the assets, rights, privileges, revenue, works, properties and effects belonging thereto, subject to the said mortgage deed of trust, for an amount representing the difference between the said obligation and the sum of \$2,778,000.00, and the Commission may upon obtaining the consent as herein defined of the Corporation, increase the said bond issue by any amount necessary to cover the capital cost of extensions, improvements and additional works or equipment of any kind for use of the railway; provided that the Commission may transfer to the Corporation those portions of the Railway within the limits of the Corporation and provided that with the approval of the Lieutenant-Governor in Council the Commission may dispose of any property not required for the purpose of the Railway and use or dispose of the whole or part of the proceeds thereof in expenditure on capital account or invest the whole or part thereof in securities of the Province of Ontario for the retirement of the said bonds at maturity.

4. In order to meet and pay the said obligation and such bonds and interest as the same become due and payable the Commission shall in each year after the expiration of ten years from the 1st of January, 1922, out of the revenue of the railway after payment of operating or working expenses, including the supply of electrical power or energy and the cost of administration and annual charge for interest, set aside annually such sums as may be necessary to provide a sinking fund, on the basis of not more than forty years for the payment of all the said obligation and bonds which shall be held for and applied towards the payment of the said obligation and such bonds or any renewal thereof at maturity, and the Commission shall have power from time to time to issue bonds for the purpose of providing for such additional money as may be necessary with the accumulated sinking fund on hand to repay the bonds so issued when the same respectively mature, provided that the sum so set aside for sinking fund shall be sufficient to provide for payment of the said obligation and bonds issued on account of the said railway within fifty years from the said 1st day of January, A.D. 1922.

5.—(a) Upon the execution of the said agreement the Corporation shall issue and deposit with the Commission the debentures included in paragraph 2 (b) hereof; and is further authorized to and shall from time to time thereafter upon the requisition in writing of the Commission issue and deposit with the Commission further similar debentures for the same amount of any increase as provided in section 3 of the bond issue of the Commission to cover the capital cost of extensions or improvements of the railway.

(b) In the event of the revenue derived from the operation of the railway being insufficient in any year to meet the operating or working expenses, including electric power or energy and the cost of administration and the annual charges for interest and sinking funds on the said obligation and bonds and for the renewal of any works belonging in whole or in part to the railway, such deficit shall be paid upon demand of the Commission by the Corporation. Any arrears of the Corporation shall bear interest at the rate of six per cent. per annum. If the Corporation shall make defaults in payment of such deficit the Commission shall thereupon subject as provided in paragraph (d) of this clause sell or otherwise dispose of so much of the debentures of the Corporation as shall be necessary to supply such deficiency at such rates of discount or premium and such terms and conditions as the Commission in its sole discretion shall deem to be in the interests of the railway, the proceeds of such debentures being used solely for the purposes herein contained.

(c) If the remaining debentures are insufficient in the opinion of the Commission to meet all payments required to be made by the Corporation under the said Act or the said Agreement, the Corporation is hereby authorized to and shall issue and deposit forthwith with the Commission similar debentures to an amount sufficient in the opinion of the Commission to make up the deficiency.

(d) All debentures from time to time issued and deposited with the Commission under this clause shall be held by the Commission as collateral security for the said obligation and bonds issued by the Commission under clause 3 and for any payment required to be made by the Corporation under this agreement or the said Act, or the Commission may lodge the said debentures or any of them with and /or hypothecate the same to a Trust Company as trustee for the holders of bonds of the Commission, and for such purpose the Commission may enter into, execute and deliver any agreement, charge, trust indenture, or other document containing such powers, terms and conditions as the Commission in its sole discretion shall deem to be in the best interests of the railway anything contained herein or in any statute or agreement to the contrary notwithstanding.

6. In case the Commission shall at any time or times be prevented from operating the railway, or any part thereof, by strike, lockout, riot, fire, invasion, explosion, act of God, or the King's enemies, or any other cause reasonably beyond its control then the Commission shall not be bound to operate the railway or such part thereof, during such time, but the Corporation shall not be relieved from any liability or payment under this agreement, and as soon as the cause of interruption is removed, the Commission shall, without any delay, continue full operation of the railway, and the Corporation shall be prompt and diligent in doing everything in its power to remove and overcome any such cause or causes of interruption.

7. It shall be lawful for and the Corporation hereby authorizes the Commission to unite the business of the Railway with that of any other railway system operated in whole or in part by the Commission, and to exchange equipment and operators from one system to the other, proper provisions being made so that each system shall pay its proportionate share of the cost of any equipment used in common.

8. If at any time the corporation of any adjacent municipality applies to the Commission for an extension of the railway into its municipality, the Commission shall notify the applicant and the Corporation in writing of a time and place to hear all representations that may be made as to the terms and conditions relating to such proposed extension. If, on the recommendation of the Commission, such extension shall be authorized, without discrimination to the applicant, as to the cost incurred or to be incurred for or by reason of any extension, the Commission may extend the railway upon such terms and conditions as may appear equitable to the Commission.

No such application for an extension of the railway into any municipality shall be granted if it is estimated by the Commission that the cost of service of the railway to the Corporation will thereby be increased or the revenue and accommodation be injuriously affected without the consent of the Corporation.

9. The consent of the Corporation required under this agreement shall mean the consent of the Council of such Corporation, such consent being in the form of a municipal by-law duly passed by the Council of the Corporation.

10. The railway and all the works, property and effects held and used in connection therewith, constructed, acquired, operated and maintained by the Commission under this Agreement and the said Act, shall be vested in the Commission on behalf of the Corporation, subject to the terms of this Agreement, but the Commission shall be entitled to a lien upon the same, for all money expended by the Commission under this Agreement and not repaid, subject to Mortgage Deed of Trust from the Railway to the British Empire Trust Limited, dated 15th July, 1911, securing debenture stock of the Railway.

11. If at any time one or more of the municipalities through which the railway now passes or serves or in which a part of the railway is situate applies to the Commission for admission as a party to this Agreement for the acquisition and operation of the railway for the extension thereof in or through the territory of such municipality upon such terms and conditions and subject to such contributions as if it had been a party to this Agreement at the date thereof for the acquisition and operation of the said railway, the Commission shall take such steps and permit such votes to be taken as are necessary under the provisions of the said Act to authorize such municipality or municipalities to enter into an agreement under the Act to acquire such an interest.

The Corporation shall thereafter upon the request of the Commission enter into a new agreement with the Commission and the applying municipality or municipalities in the form, so far as applicable, of this agreement and containing paragraphs 5, 10, 12 and 13 of the standard form of agreement set out in *The Hydro-Electric Railway Act, 1914*, and such other provisions as may be approved by the Lieutenant-Governor in Council, and this agreement shall be deemed to be modified accordingly, and shall remain in full force and effect, subject to such modifications.

12. This agreement shall continue and extend for a period of fifty years from the date thereof, and at the expiration thereof be subject to renewal, with the consent of the Corporation from time to time for like periods of fifty years. At the expiration of this Agreement the Commission shall determine and adjust the rights of the Corporation, having regard to the amount paid or assumed by the Corporation under the terms of this Agreement, and such other considerations as may appear equitable to the Commission, and are approved by the Lieutenant-Governor in Council.

In witness whereof the Commission and the Corporation have respectively affixed their corporate Seals under the hands of their proper officers.

Chapter 69, 1922.

An Act respecting the Construction and Operation of Municipal Electric Railways

Assented to 13th June, 1922.

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

Short title.

1. This Act may be cited as *The Municipal Electric Railway Act, 1922.* 4 Geo. V, c. 31, s. 1. *Amended.*

Interpretation.

2. In this Act,

"Association."

(a) "Association" shall mean "Municipal Electric Railway Association." *New.*

"Commission."

(b) "Commission" shall mean "Hydro-Electric Power Commission of Ontario."

"Corporation."

(c) "Corporation" "corporations" shall mean a municipal corporation or municipal corporations other than the municipal corporation of a county. 4 Geo. V, c. 31, s. 2.

"Trust Corporation."

(d) "Trust Corporation" shall include "Trust Company." *New.*

Investigation and report by Commission.

3. On the request expressed by resolution of the corporations of two or more municipalities situate in any locality in which electrical power or energy may be supplied by the Commission under *The Power Commission Act*, the Commission as the agent of such corporations and at the expense of such corporations, may enquire into, examine, investigate and report upon:

Rev. Stat. c. 39.

- (a) The cost of constructing, equipping and operating an electric railway in such locality including a sum for working capital and a sum to cover any probable loss by discount on the sale of the bonds of the Association;
- (b) The municipalities which will be served by such railway;
- (c) The population of each of such last mentioned municipalities as shown by the last enumeration thereof by the assessors;
- (d) An estimate, including the rates and fares proposed to be charged, of the probable revenue from the railway;
- (e) The practicability of the undertaking and its economic value to the locality to be served by it. 4 Geo. V, c. 31, s. 3. *Amended.*

Agreement among corporations for construction and operation.

4.—(1) Such corporations may enter into an agreement (Form 1) with each other, for the construction, equipment and operation of an electric railway, to be operated by electrical power or energy supplied by the Commission.

What agreement shall set out.

(2) The agreement shall provide for:

- (a) The location of the line of railway;
- (b) The character of the construction and of the equipment to be furnished;

- (c) The proportions in which the cost of construction and equipment, and the working capital of the railway shall be borne by each corporation;
- (d) The issuing of debentures by the corporations and their deposit with a Trust Corporation as collateral security for any bonds which may be issued by the Association to meet the cost of construction and equipment of the railway and to provide working capital therefor;
- (e) The terms and conditions on which electrical power or energy shall be supplied by the Commission for the operation of the railway;
- (f) The construction and equipment of the railway either by the Association or by the Commission;
- (g) The entrustment of the management and operation of the railway to the Association to be appointed or elected as hereinafter provided;

(3) The agreement may provide for:

What agreement may set out.

- (a) The construction of the railway upon any right of way acquired by the Commission for the transmission of electrical power or energy under *The Power Commission Act*, and the amount chargeable to the railway by way of rental or otherwise for the use of such right of way; 4 Geo. V, c. 31, s. 4. *Amended*.
- (b) The acquiring by purchase or lease of any steam, electric or street railway situate within one or more of such municipalities or any part or parts of any steam, electric or street railway which are situate within one or more of such municipalities and are capable of forming part of the proposed railway system for the service of such municipalities, or the obtaining of running rights over the same;
- (c) The extension of the railway into any adjacent municipality under an agreement to be made between the Association and the corporation of such municipality with the approval of the corporations parties to the agreement. *New*.

5. Before the submission of the by-law to the electors as provided in section 7 the corporations shall without the assent of the electors enter into an agreement with the Commission, conditioned on the assent of the electors of each of the municipalities being obtained to the agreement mentioned in section 4.

Agreement with Commission as to certain matters.

- (a) For the supply by the Commission of the electrical power or energy required for the operation of the railway; and,
- (b) For the construction and equipment of the railway and any extension thereof by the Commission, if construction and equipment is to be by the Commission; and
- (c) For the construction of the railway upon any right of way as set out in subsection 3 of section 4. *New*.

6.—(1) Except where otherwise expressly provided, the provisions of this Act relating to the construction of a railway and to the equipment, maintenance and operation of it shall apply to the purchase of

Provisions as to construction to apply to purchase.

a railway or any part or parts thereof and the provisions of this Act relating to maintenance and operation shall apply to a railway or any part or parts thereof leased. *New.*

Operation by
electrical
power.

(2) Where a steam railway or part thereof is purchased or leased it shall be operated by electrical power or energy supplied by the Commission under *The Power Commission Act*. *New.*

Submission of
by-law approv-
ing of
agreement.

7.—(1) The council of each of the corporations interested shall submit to the vote of the electors qualified to vote on money by-laws, a by-law approving of the agreement and directing its execution, and if a majority of the electors voting thereon vote in favour of the by-law, the council shall pass the same and the agreement shall be executed as directed by the by-law.

Publication of
by-law and
agreement.

(2) The by-law shall not be voted upon by the electors until the by-law and agreement have been published in the manner provided by *The Municipal Act* in the case of money by-laws, at least once a week for four successive weeks. 6 Geo. V, c. 37, s. 2, part; 10-11 Geo. V, c. 57, s. 2. *Amended.*

Recitals in by-
law.

8. The by-law submitted to the electors shall recite:

- (a) The estimated cost of the construction and equipment of the railway, including a sum for working capital;
- (b) The portion of such cost to be borne by the corporation;
- (c) The total annual amount estimated to be required for the maintenance and operation of the railway and for sinking fund charges and interest;
- (d) The portion of such amount to be borne by the corporation; 4 Geo. V, c. 31, s. 5.
- (e) The estimated probable revenue from the railway.

Case of any
corporation
failing to
pass by-law
and execute
agreement.

9.—(1) Where any corporation or corporations named as party or parties to the agreement have failed to pass the necessary by-law and to execute the agreement, and the amount for which such corporation or corporations would be liable under the agreement does not exceed fifteen per cent. of the estimated cost of the construction and equipment of the railway and of the amount to be provided for working capital and the remaining corporations, parties to the agreement, have by resolution of their respective councils, expressed the desire to proceed with the undertaking notwithstanding the failure of such first-mentioned corporation or corporations to execute the agreement, the Association or the Commission, as the case may be, may proceed with the construction and equipment of the railway, and in such case the corporations which have executed the agreement shall without the assent of the electors deposit with the Trust Corporation additional debentures to the amount required to replace the debentures which would have been deposited by the first-mentioned corporation or corporations in the proportions in which they are liable under the agreement to contribute to the cost of the construction and equipment of the railway and to working capital therefor.

(2) Until a corporation has executed the agreement and deposited debentures with the Trust Corporation as required by this Act, the Association or the Commission, as the case may be, shall not be bound

to construct, equip, maintain or operate within the limits of the municipality any works provided for by the agreement, except such as may be necessary for the construction and equipment of the railway in passing through the municipality the corporation of which has failed to pass the necessary by-law and to execute the agreement to and from municipalities the corporations of which have executed the agreement and deposited debentures to the amounts stated therein. 9 Geo. V, c. 45, s. 9. (3) *Amended.*

10.—(1) As soon as practicable after the by-laws and agreements have been approved of by the electors and the agreements executed the head of the council of that corporation which by the agreement is liable to contribute the largest sum to the cost of the construction and equipment and working capital of the railway shall by notice to each corporation fix a time and place for a meeting of the representatives of the corporations to elect the members of a Municipal Electric Railway Association for the construction, equipment and operation or the operation only of the railway, as the case may be, and a meeting for the election of a successor or successors shall be called in like manner.

Meeting to elect association.

(2) The council of each corporation shall by resolution appoint one of its members as its representative at such meeting, and such corporation shall be bound by the action of such representative at the meeting.

Appointment of representative.

(3) The representatives shall appoint one of themselves to preside at the meeting and another person, not a representative to act as secretary.

Chairman and secretary.

(4) The Association shall consist of five members elected or appointed as hereinafter provided and each member shall hold office for three years and until his successor is elected or appointed.

Number of members and term of office.

(5) Each corporation which is liable under the agreement to contribute not less than 25 per cent. of the cost of the construction and equipment and working capital of the railway shall be entitled to nominate and elect one member of the Association, and a second member where it is liable to contribute not less than 50 per cent. of such cost, and such member or members shall be elected by by-law of the council.

Corporation contributing certain percentages entitled to elect one or two members.

(6) The voting power of each corporation for the election of the members other than those elected under subsection 5 shall be as follows:

Voting power.

- One vote where the contribution of the corporation to the estimated cost does not exceed..... \$250,000
- Two votes where it exceeds \$250,000 but does not exceed..... \$500,000
- Three votes where it exceeds \$500,000 but does not exceed..... \$1,000,000
- and one additional vote for each additional \$1,000,000 or fraction thereof which it is liable to contribute to such estimated cost.

(7) A majority in number and votes of the representatives of the corporations shall be necessary in order to elect the members of the Association or the remaining members thereof in the case provided for by subsection 5.

Majority in number and votes necessary to elect.

Nominations
in case of
failure to
elect and
appointment
by Liéut.-
Gov. in
Council.

(8) Where the corporations fail to elect the full number of members of the Association under the provisions of the preceding subsections, then the representatives of the corporations shall nominate one or more persons to complete the membership of the Association, such nominations to be made by not less than 25 per cent. of the representatives and 25 per cent. of the votes of the representatives of the corporations, and the names of the persons so nominated shall be set out in a resolution of the meeting, certified by the Chairman and the Secretary of the meeting and submitted to the Lieutenant-Governor in Council and thereupon the Lieutenant-Governor in Council may appoint from such nominees the person or persons to complete the membership of the Association.

Incorporation
of Association.

(9) The members so elected or appointed shall be a body corporate under the name of "The (name of railway) Municipal Electric Railway Association."

Vacancies.

(10) When and so often as a vacancy occurs in the office of a member of the Association by death, resignation, or any other cause the corporation in the case provided for by subsection 5, shall appoint, and in other cases the representatives of the corporations shall elect, in the manner provided by this section another person to fill the office for the remainder of the term. A member of the Association may resign his office by filing a notice thereof with the secretary of the Association.

Member of
Council not
eligible.

(11) No member of the council of any of the corporations shall be eligible for appointment as a member of the Association.

Appointment
of Chair-
man and
Vice-Chair-
man.

(12) The Association at its first meeting shall appoint one of the members as chairman and another as vice-chairman, and a majority of the members shall form a quorum.

Salaries.

(13) The Chairman, the Vice-chairman and each of the other members of the Association may be paid such salary or remuneration as may be fixed by the agreement, or as may be agreed upon from time to time by a resolution of the Councils of a majority of the corporations and in case no salary or remuneration is so fixed or agreed upon, the Chairman shall be paid a salary of \$4,000, the Vice-chairman \$3,000, and each of the other members \$2,000 yearly by the Association.

Annual
report of
association
to council
of each
corporation.

(14) Immediately after the close of each calendar year, the Association shall prepare and report to the council of each of the corporations interested and publish a complete, audited and certified statement of its affairs, including revenue and expense account, balance sheet and profit and loss statement, and such statement shall be accompanied by a general report of the operations of the Association during the year and a certificate from a competent engineer as to the physical condition of the railway and its equipment and as to the adequacy and sufficiency of the funds set apart for any renewals and replacements.

Appointment
of Trust
Corporation.

11. The Association shall appoint a Trust Corporation with which the debentures of the corporations shall be deposited as required by this Act and shall notify each of the corporations of the appointment.

12.—(1) Each of the corporations shall issue and deposit with the Trust Corporation named by the Association, debentures to the amount apportioned as its share of the cost of the construction and equipment and of working capital of the railway and such debentures shall be payable at the expiration of 44 years from the date of the agreement and bear interest at the rate of $4\frac{1}{2}\%$ per annum payable semi-annually.

Issue and deposit of debentures with Trust Corporation.

(2) Each of the corporations shall also from time to time thereafter upon the requisition in writing of the Association and in the proportions fixed by the agreement, issue and deposit with the Trust Corporation such further debentures payable at the same time and bearing the same rate of interest as may be necessary to permit the Association to raise the moneys,

Issue and deposit of further debentures.

(a) to cover any additional costs above estimate of such construction and equipment and for working capital of the railway;

(b) for the construction and equipment and working capital of any extension of the railway if the agreement provides for extensions;

(c) for the construction of branch lines, sidings, permanent works and betterments and of additional equipment, in all not exceeding ten per cent. of the estimated cost of the construction and equipment and the working capital of the railway as fixed by the agreement;

(d) to cover any loss by discount on the sale of the bonds of the Association.

(3) The debentures so issued shall be held by the Trust Corporation as collateral security for all bonds issued by the Association to meet the cost of construction and equipment and for working capital of the railway, but whenever interest upon the bonds issued by the Association as hereinafter authorized shall be paid by the Association the corresponding interest coupons attached to the debentures deposited by the corporations with the Trust Corporation shall be delivered up by the Trust Corporation for cancellation to all such of the corporations as shall not be in default in respect of their obligations to and agreements with the Association.

Debentures to be collateral security to bonds of Association

13.—(1) The Association may raise money for the construction and equipment and for working capital of the railway by the issue for and on behalf of the Association of bonds payable at the expiration of 44 years from the date of the agreement and bearing interest at the rate of $4\frac{1}{2}\%$ per cent. per annum payable semi-annually.

Bonds of Association.

(2) The Association may also from time to time issue further bonds payable at the same time and bearing interest at the said rate

Issue of further bonds.

(a) to cover any additional costs above estimates of such construction and equipment and for working capital of the railway;

(b) for the construction and equipment and working capital of any extension of the railway if the agreement provides for extensions;

(c) for the construction of branch lines, sidings, permanent works and betterments and for additional equipment in all not exceeding ten per cent. of the estimated cost of the construction and equipment and the working capital of the railway as fixed by the agreement;

(d) to cover any loss by discount on the sale of the bonds of the Association.

Bonds not to exceed debentures and to rank *pari passu*.

(3) All bonds issued by the Association shall rank *pari passu* and shall bear on their face the corporate name of the Association and the amount of the bonds which may be issued by the Association shall not at any time exceed the amount of debentures deposited by the corporations with the Trust Corporation as collateral security for such bonds.

Mortgage deed securing bonds.

(4) The Association shall secure such bonds by a Deed of Trust creating a charge in favour of the Trust Corporation on the railway and all the assets, rights, privileges, revenue, works, property and effects belonging thereto or held in connection therewith, and also upon the debentures of the corporations deposited with the Trust Corporation as collateral to the bonds of the Association.

Bonds first charge on railway with exceptions.

(5) Subject to the payment of the working expenditures of the railway and to any prior charge or encumbrance in the case of a railway which has been purchased, the bonds of the Association shall be a first preferential claim and charge upon the railway and all the assets, rights, privileges, revenue, works, property and effects belonging thereto or held or used in connection therewith.

Enforcement of payment of bonds.

(6) No proceeding shall be taken to enforce payment of such bonds or of the interest thereon except through the Trust Corporation under the provisions of the said Deed of Trust.

Raising of sinking fund delayed for certain period.

(7) The bonds shall be payable at the same time as the debentures of the corporations but it shall not be necessary for the Association to raise or provide any sinking fund for the retirement of the bonds until after the expiration of three years from the date of the commencement of the operation of the railway or until after the expiration of five years from the date of the agreement, whichever shall be the shorter period.

Relief of corporations where bonds purchased out of sinking funds.

(8) When bonds issued by the Association shall be purchased out of sinking fund and cancelled the corporations shall be relieved by the Trust Corporation of liability in respect of the debentures deposited by them with the Trust Corporation to a similar extent, and when convenient so to do debentures of the corporations in such amounts may be delivered up to them by the Trust Corporation for cancellation.

Hypothecation of bonds.

(9) During the course of construction and equipment of the railway the Association may in lieu of selling its bonds raise money from time to time to meet the cost of such construction and equipment by borrowing upon the bonds authorized to be issued by it, and the Association may hypothecate such bonds or any part thereof for such purposes.

15. All debentures of the corporations and all bonds of the Commission shall be issued repayable on the sinking fund plan. Sinking fund plan only.

16. Where a railway or any part thereof is purchased and any bonds, debts or obligations shall stand charged against or upon it the Association may assume such bonds, debts and obligations as part of the purchase price to be paid for such railway or part thereof. Assumption of bonded debt in case of railway purchased. If the Association shall assume and agree to pay such bonds or debts the corporations shall deposit with the Trust Corporation in the proportions fixed by the agreement debentures to the amount of the debts assumed, bearing the same rate of interest and maturing at the same time as other debentures of the corporations deposited or to be deposited with the Trust Corporation.

17. The Association shall so regulate and fix all tolls, tariffs of tolls and fares for the carriage of passengers and freight that the revenue derived therefrom in each year will be sufficient to provide for Requirement as to fixing tolls and fares.

- (a) the cost of maintenance and operation of the railway including the cost of the supply of electrical power or energy and the cost of administration;
- (b) the cost of making such renewals and replacements as are properly chargeable to revenue;
- (c) the payment of the interest on and in due course of the principal of any mortgage, encumbrance or debt forming a lien or charge on the property and works of a railway purchased under the provisions of this Act, and
- (d) the payment of the interest on and the formation by the Association of a sinking fund sufficient to retire all outstanding bonds of the Association at maturity. *New.*

18.—(1) If in any year such revenue is more than sufficient to satisfy the costs, charges and payments mentioned in section 17, the Association may pay over the surplus to the corporations, parties to the agreement, in the proportions fixed thereby, or may apply such surplus to meet the cost of the construction of branch lines, sidings, permanent works, and betterments, and of additional equipment or may retain such surplus as a reserve fund to meet the cost of future operation or to meet contingencies. Application of surplus revenue.

(2) If in any year such revenue and any accumulated surplus revenue from prior periods is insufficient to satisfy the costs, charges and payments mentioned in section 17, the Association shall within one month following the termination of such year make demand upon the corporations to provide and pay over to the Association such sum as shall be necessary to make up the deficiency and the council of each of the said corporations shall forthwith raise and pay over to the Association its proportion, as fixed by the agreement, of such sum, together with interest thereon at the rate of 6% per annum from the date of demand for payment thereof by the Association. Corporations to meet deficits in operations.

(3) The Association shall from time to time adjust and apportion the amounts payable to the corporations under subsection 1 or by the corporations under subsection 2 and such adjustment and apportionment shall be final and binding upon the corporations. Apportionment by association.

Investment
of sink-
ing funds.

19. All sinking funds shall be paid over to and be invested by the Trust Corporation in bonds of the Dominion of Canada or Province of Ontario or in bonds of the Association which prior thereto had been sold by the Association and all bonds of the Association so purchased out of sinking fund shall be cancelled by the Trust Corporation.

Borrowing
powers—
debentures
not to be
counted.

20. Any debentures issued under the authority of this Act shall not be included in ascertaining the limit of the borrowing powers of the corporations as prescribed by *The Municipal Act* or by any other general or special Act. 6 Geo. V, c. 37, s. 8; 7 Geo. V, c. 27, s. 32. *Amended.*

Extension
into ad-
jacent muni-
cipality.

21.—(1) Where the agreement so provides the Association with the consent expressed by by-law of each of the corporations, parties to the agreement, which may be passed without the assent of the electors may enter into an agreement with the corporation of any adjacent municipality for the extension of the railway into such adjacent municipality.

Submission
to electors.

(2) The council of such adjacent municipality shall submit, to the vote of the electors qualified to vote on money by-laws, a by-law approving of the agreement and directing its execution as required in the case of a by-law and agreement for the construction and equipment of a railway.

Application
of Act to
extensions.

(3) The provisions of this Act relating to the construction, equipment and operation of the railway shall apply to the construction, equipment and operation of such extension.

Payment of
debentures
and bonds.

(4) All debentures of the corporations and all bonds of the Association issued for the construction, equipment and working capital of such extension shall be payable at the same time as the debentures and bonds issued for the construction and equipment of the railway.

Adjacent
municipality
as party to
original
agreement.

(5) After the corporation of such adjacent municipality has deposited debentures with the Trust Corporation to meet its portion of the cost of the construction, equipment and of the working capital of the extension, it shall be deemed to be a party to the agreement for the construction and equipment of the railway.

Powers as
to construc-
tion and
operation.

22. The Association or the Commission may construct and equip or the Association may construct, equip, maintain and operate the railway as provided by the agreement and for that purpose, subject to the provisions of section 24, the Association or the Commission shall have and may exercise all the powers, rights, immunities and privileges of a company incorporated by special Act for the construction and operation of a railway under *The Ontario Railway Act*, so far as the same are applicable. 4 Geo. V, c. 31, s. 12. *Amended.*

c. 185.
Rev. Stat.

Provision
for opera-
tion by
Commission.

23.—(1) The Association may enter into an agreement with the Commission for the operation of the railway by the Commission as its agent for a period not exceeding five years, but such agreement may be renewed from time to time for further periods not exceeding five years at any one time.

Books and
accounts to
be kept.

(2) Where such an agreement is made the Commission shall maintain separate and distinct books and accounts with respect to the

operation of the railway and all moneys received by it in connection with such operation shall be kept in a separate bank account and shall not be merged or mixed with the funds of the Commission derived from any other sources.

24.—(1) Where land is required for any of the purposes for which land may be acquired or expropriated under *The Ontario Railway Act* the Association or the Commission, as provided by the agreement, shall in respect thereof have the powers and shall proceed in the manner provided by *The Ontario Public Works Act*, where the Minister of Public Works takes land or property for the use of Ontario and the provisions of the said last mentioned Act shall, *mutatis mutandis*, apply. Expropriation of land—application of Rev. Stat. c. 35.

(2) Where compensation would be payable upon the exercise of any powers by the Association or the Commission under *The Ontario Railway Act*, the same shall be determined in the manner provided by *The Ontario Public Works Act*. Compensation.

25. Sections 66 to 69 and section 210 of *The Ontario Railway Act* shall not apply to the Association or the Commission or to any railway constructed, purchased or operated under the authority of this Act, but the construction, equipment and operation of such railway by the Association or Commission shall be in accordance with the provisions of *The Ontario Railway Act* except where they are inconsistent with the provisions of this Act. Provisions of Rev. Stat. c. 185, how far applicable.

26. No action or prosecution shall be brought against the Commission or any member thereof or any of its officers without the consent of the Attorney-General of Ontario for anything done under this Act, but this shall not apply to an Association. 4 Geo. V, c. 13, s. 15. No action against Commission without fiat of Att'y-Gen.

27. The Province shall not nor shall the Commission or any member thereof incur any liability by reason of any error or omission in any estimates, plans or specifications prepared or furnished by the Commission. Province or Commission not liable for errors in estimates.

28.—(1) Notwithstanding anything contained in any general or special Act heretofore passed by this Legislature, a corporation shall not sell or otherwise dispose of any electric railway or street railway owned by it or of which it has acquired control by foreclosure or other proceedings or under the provisions of any special Act, unless and until a by-law authorizing such sale or other disposal has been submitted to and has received the assent of the electors qualified to vote on money by-laws according to the provisions of *The Municipal Act*. 6 Geo. V, c. 37, s. 4. Corporation not to sell any railway without assent of electors.

(2) Every agreement or arrangement entered into by a corporation in violation of subsection 1 shall be null and void. 9 Geo. V, c. 45, s. 8 (2).

29.—(1) Subject to the provisions of subsections 3 and 4, the following Acts and parts of Acts are hereby repealed: Repeal.

<i>The Hydro-Electric Railway Act, 1914.</i>	(4 Geo. V, Chapter 31.)	The Whole.
<i>The Hydro-Electric Railway Act, 1915.</i>	(5 Geo. V, Chapter 32.)	The Whole.
<i>The Hydro-Electric Railway Act, 1916.</i>	(6 Geo. V, Chapter 37.)	The Whole.
<i>The Statute Law Amendment Act, 1917.</i>	(7 Geo. V, Chapter 27.)	Section 32.

The Hydro-Electric Railway Act, 1919. (9 Geo. V, Chapter 45.) The Whole.
The Hydro-Electric Railway Act, 1920. (10-11 Geo. V, Chapter 57.) Sections 2, 3, 4, 5, 6 and 7 and that part of section 8 relating to The Toronto and Eastern Railway. *New.*

Certain by-laws and agreements declared void.

(2) All by-laws heretofore passed by municipal corporations and all agreements made between municipal corporations and the Commission under the provisions of *The Hydro-Electric Railway Act, 1914*, and amendments thereto are hereby declared to be void and of no further force or effect, but this shall not apply to any by-laws passed or agreements made with respect to the railways mentioned in clauses (a) and (b) of subsection 3, and clause (b) of subsection 4.

4 Geo. V, c. 31, to apply to certain railways.

(3) *The Hydro-Electric Railway Act, 1914*, and amendments thereto shall in so far as they apply remain in full force and effect with respect to:

(a) The maintenance and operation of The Sandwich, Windsor and Amherstburg Railway and The Windsor and Tecumseh Electric Railway acquired and operated by the Commission for certain municipal corporations under the contracts confirmed by sections 8 and 9 of *The Hydro-Electric Railway Act, 1920*;

(b) The maintenance and operation by the Commission of The Guelph Radial Railway in accordance with the terms of the agreement confirmed by *The Guelph Railway Act, 1921*;

(c) The future acquisition, equipment, maintenance and operation by the Commission of the railways mentioned in *The Toronto Radial Railway Act, 1921*;

(d) The future acquisition by the Commission of the shares, securities and/or property and rights of The Toronto Suburban Railway Company and the equipment, maintenance and operation by the Commission of such railway under the provisions of *The Toronto Suburban Railway Company Act, 1922*.

4 Geo. V, c. 31, to apply to certain railways with exceptions.

(4) *The Hydro-Electric Railway Act, 1914*, and amendments thereto shall, in so far as they apply, remain in full force and effect with respect to:

(a) The construction, equipment, maintenance and operation of a railway from the City of Toronto to the Village of Port Credit and a railway from the Village of Port Credit to the City of St. Catharines under an agreement which may hereafter be entered into by the Commission and the municipal corporations interested as provided by subsection 5;

(b) The future acquisition by the Commission of the shares, securities and/or property and rights of The Niagara, St. Catharines and Toronto Railway Company and the equipment, maintenance and operation by the Commission of such railway under an agreement made between the Commission and the municipal corporations interested, with the assent of the electors as provided by the said Act;

except that:—

Exceptions.

i. The following clauses shall be substituted for clauses c and d of section 5a of the said Act as enacted by 5 Geo. V, Chapter 32, section 2;

- (c) The money to meet the share of the cost payable by the corporation shall be borrowed on the credit of the corporation at large by the issue of its debentures, but the special rate imposed by the by-law to provide for the payment of the principal and interest of the debentures shall be imposed upon the rateable property within such district or districts only. Special rate on specified district in township.
- (d) The money to meet the corporation's share of any deficit resulting from the operation of the railway in any year as provided in paragraph 4 of the Form of Agreement set out as Schedule "A" shall also be raised by a special rate upon the rateable property within such district or districts only. Special rate to meet deficits.
- ii. Clause *o* of paragraph 1 of the Standard Form of Agreement relating to extensions of the railway set out as a schedule to the said Act shall not apply but the Commission with the consent expressed by by-law of each of the corporations parties to the agreement with the Commission which may be passed without the assent of the electors may enter into an agreement with the corporation of any adjacent municipality for the extension of the railway into such adjacent municipality and the corporation of such adjacent municipality with the assent of the electors qualified to vote on money by-laws may enter into such agreement and borrow by the issue of its debentures the money necessary to meet its share of the cost of the construction and equipment of such extension. Provisions for extension into adjacent municipality.
- iii. The power conferred by the said Act on the Lieutenant-Governor in Council to authorize the Treasurer of Ontario for and on behalf of the Province to guarantee the payment of bonds issued by the Commission shall not apply. No power to guarantee bonds.
- iv. Subsection 2 of section 11 of the said Act shall be deemed to contain the following proviso:—
 Provided that the Commission in lieu of holding the said debentures may lodge and/or hypothecate the same or any of them with or to a trust company or corporation as Trustee for the holders of all the bonds of the Commission issued for the Railway, including bonds, the payment of which is guaranteed by the Province and for such purpose the Commission may enter into, execute and deliver any agreement, charge, trust indenture or other document containing such powers, terms and conditions as the Commission in its sole discretion shall deem to be in the best interests of the railway, anything contained herein or in any Act or agreement to the contrary notwithstanding, but the bonds issued by the Commission shall not exceed the amount of the municipal debentures deposited with the Commission. Hypothecation of municipal debentures by Commission as collateral security to bonds of Commission.
- v. The words "fifteen per cent." shall be substituted for the words "ten per cent." wherever they occur in section 9 of 9 Geo. V, c. 45. Case of failure of Corporation to carry by-law.

Application
of excep-
tion.

- vi. The foregoing exceptions contained in paragraphs i to v. inclusive shall be deemed to govern any agreements to be hereafter executed and the said agreements shall be subject thereto.

New agree-
ments for
construction,
etc., of cer-
tain rail-
ways with-
out assent
of electors
on certain
conditions.

(5) The Commission and the municipal corporations interested may enter into an agreement for the construction, equipment, maintenance and operation of a railway from the City of Toronto to the Village of Port Credit and a railway from the Village of Port Credit to the City of St. Catharines in the following manner:—

Resolution of
council.

- (a) The council of each municipal corporation may on or before the 15th day of October, 1922, pass a resolution requesting the Commission to proceed with the construction, equipment and operation of the railway and authorizing the execution of the agreement on behalf of the corporation;

Submission
of agree-
ment where
resolution
not passed
or where
electors
petition.

- (b) If the council of any municipal corporation interested neglects or refuses to pass such resolution on or before the 15th day of October, 1922, or, except in the case of the Cities of Toronto and Hamilton, if fifteen per cent. of the electors on or before the 15th day of November, 1922, petition the council, whether or not the council has passed such resolution, to submit the agreement to the electors, then it shall be the duty of the council to submit the agreement to the electors at the next ensuing annual municipal election;

Execution
of agreement.

- (c) If the assent of the municipal corporations interested is obtained by resolution of the council or by the approval of the electors to the agreement on the submission of the same as above required, then each municipal corporation interested shall execute the agreement and the Commission may proceed with the construction, equipment and operation of the railway according to the terms of the agreement;

"Electors,"
meaning of.

- (d) "Electors" in this subsection means those electors qualified to vote on money by-laws in the municipality or in the specified district or districts of the township, as the case may be.

Variations
in form
of agree-
ment.

30. Such variations, additions or alterations as are in conformity with the provisions of this Act may be made to the Agreement set out as Form 1 to this Act with the approval of the Lieutenant-Governor in Council.

Commence-
ment of
Act.

31. This Act shall come into force and take effect on the day upon which it receives the Royal Assent.

FORM 1

(Referred to in Section 8.)

THIS AGREEMENT made this day of 192

Between:

The Municipal Corporations of
"The Corporations"

hereinafter called

In this Agreement "Association" means "Municipal Electric Railway Association" elected or appointed as provided by *The Municipal Electric Railway Act, 1922*.

Whereas pursuant to *The Municipal Electric Railway Act, 1922*, the Hydro-Electric Power Commission of Ontario, hereinafter called the "Commission," at the request of the Corporations

and after enquiry, examination and investigation into the various matters set out in section 3 of *The Municipal Electric Railway Act, 1922*, have reported to the Corporations that

(a) The cost of constructing, equipping and operating an electric railway in such municipalities including a sum for working capital and a sum to cover any probable loss by discount on the sale of the bonds of the Association will be

(b) The proportion of the capital cost to be borne by each of the Corporations is as set out in Schedule "B" attached hereto

(c) The population of each of such municipalities as shown by the last enumeration thereof by the assessors is

(d) The estimated probable revenue from the railway will be

And whereas the Corporations have determined that it is in the interests of the inhabitants of such municipalities that the railway should be constructed, equipped and operated over the routes laid down in Schedule "A" attached hereto. *Where construction and equipment is by the Commission insert the following recital:* (And whereas the Corporations have determined that the railway should be constructed and equipped by the Commission and the Commission has agreed with the Corporations to construct and equip the railway but upon the express condition that the Commission shall not be in any way liable for any errors or omissions in the estimates, plans or specifications or for any financial or other obligations or loss whatsoever by virtue of the construction and equipment of the railway).

Where construction and equipment are by the Association insert the following recital: (And whereas it has been determined by the Corporations that the railway should be constructed and equipped by the Association). And whereas the electors of each of the Corporations have assented to by-laws authorizing the Corporations to enter into this Agreement for the construction and equipment of the railway as laid down in Schedule "A."

Now this agreement witnesseth that each of the Corporations covenants and agrees with the other as follows:

1. The railway shall be constructed and operated over the routes laid down in Schedule "A."
2. The character of the construction and equipment of the railway shall be as far as possible first class, modern and standard and so as to give the best service and accommodation possible, having regard to the districts to be served.

3. To bear its share of the cost of construction and equipment and the amount to be provided for working capital of the railway by each Corporation as set out in Schedule "B."

4. To issue and deposit with the Trust Corporation named by the Association, debentures to the amount set out in Schedule "B" as its share of the cost of the construction and equipment and of working capital of the railway, such debentures to be payable at the expiration of forty-four years from the date of this Agreement and to bear interest at the rate of four and one-half per cent. per annum, payable semi-annually.

5. Upon the requisition in writing of the Association and in the proportions fixed by this Agreement to issue and deposit with the Trust Corporation such further debentures payable at the same time and bearing the same rate of interest as may be necessary to permit the Association to raise the moneys.

(a) To cover any additional costs above estimates of such construction and equipment and for working capital of the railway;

(b) For the construction and equipment and working capital of any extension of the railway. (*This clause to be struck out if Agreement does not provide for extensions.*)

(c) For the construction of branch lines, sidings, permanent works and betterments and for additional equipment in all not exceeding ten per cent. of the estimated cost of the construction and equipment and the working capital of the railway as fixed by this agreement;

(d) To cover any loss by discount on the sale of the bonds of the Association.

6. Electrical power or energy for the operation of the railway shall be supplied by the Commission in accordance with the agreement made with the Commission and the obligations of the Corporations thereunder shall be carried out by the Association.

(*Here set out a synopsis of the terms and conditions of the Agreement including the amount of power or energy to be supplied and the price to be paid and the terms of payment.*)

7. The railway shall be constructed and equipped by the Association / Commission as the case may be.

8. The management and operation of the railway shall be and are hereby entrusted to an Association to be elected or appointed as provided by *The Municipal Electric Railway Act, 1922*. *Where the railway is to be constructed on any right-of-way of the Commission add*

9. The railway shall be constructed on the following right-of-way acquired by the Commission for the transmission of electrical power or energy

(*Here describe right-of-way in general terms but so as to identify it*) in accordance with the agreement made with the Commission under which a rental of \$ _____ is to be paid to the Commission annually. The said rental shall be paid to the Commission by the Association on behalf of the Corporations.

If the Corporations determine that provision should be made for extensions of the railway into any adjacent municipality add

10. The railway may be extended into any adjacent municipality under an agreement to be made between the Association and the Corporation of such municipality with the approval of the Corporations parties to this agreement.

When the Corporations determine to acquire by purchase any steam, electric or street railway situate within one or more of such municipalities, or any parts of any steam, electric or street railway

which are situate within one or more of such municipalities and capable of forming part of the proposed railway system appropriate recitals should be added to the agreement setting out the report of the Commission as to the purchase price and as to the other matters required in a report from the Commission in the case of the construction and equipment of a railway and the provisions of the agreement relative to construction and equipment of the railway should be altered or additions should be made thereto to cover the purchase of the railway or of any part or parts thereof.

Where the Corporations determine to lease or obtain running rights over any such railway or any such part or parts of a railway as above set out add

11. The railway or that part or those parts of the railway (describe the part or parts) as the case may be shall be leased by the Association upon the following terms and conditions (here set out the terms and conditions) and upon such other terms and conditions as the Association may deem proper and the Association shall execute the said lease and carry out its provisions on behalf of the Corporations.

Where the Corporations determine to obtain running rights as above set out add

12. The Association shall enter into an agreement with the Railway Company to obtain running rights over the Railway or that part or those parts of the Railway (describe the part or parts) over the following part or parts of the Railway (describe the part or parts) on the following terms and conditions (here set out terms and conditions).

13. To keep, observe and perform the covenants, provisos and conditions set forth in this agreement intended to be kept, observed and performed by the Corporations and to execute such further or other documents and to pass such by-laws as may be requested by the Commission or the Association for the purpose of fully effectuating the object and intent of this agreement and of carrying out the provisions of *The Municipal Electric Railway Act, 1922*.

14. To perform and carry out all the duties and obligations cast upon it by *The Municipal Electric Railway Act, 1922*, with reference to the construction, equipment, maintenance and operation of the railway or of any extension of it.

15. Should the Corporation fail to perform any of its duties or obligations to the Association under this Agreement or under the said Act the Association may in addition to all other remedies and without notice discontinue the service of the railway to such Corporation until the said duty or obligation has been fulfilled and no such discontinuance of service shall relieve the Corporation in default from the performance of such duty or obligation.

In witness whereof each of the Corporations has affixed its corporate seal and the hands of its proper officers.

Chapter 120, 1922.

An Act respecting the City of Niagara Falls

Assented to 4th May, 1922.

Preamble.

WHEREAS the Corporation of the City of Niagara Falls has by its petition prayed that it be enacted as hereinafter set forth, and it is expedient to grant the prayer of the said petition;

Therefore, His Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

By-law
No. 1076
confirmed.

1. By-law No. 1076 of the Corporation of the City of Niagara Falls and the Agreement therein referred to, both of which are set forth in full in Schedule "A" to this Act, are hereby ratified and confirmed and declared to be legal, valid and binding upon the said Corporation and the ratepayers thereof and upon the parties to the said agreement, anything in any Statute of the Province of Ontario to the contrary notwithstanding.

Commence-
ment of
Act.

2. This Act shall come into force on the day upon which it receives the Royal Assent.

SCHEDULE "A"

CITY OF NIAGARA FALLS

By-law No. 1076.

A By-law to fix the assessment and maximum rate of taxation of the properties of the Ontario Power Company and the Ontario Transmission Company for a period of ten years.

Whereas in respect of the properties of the Ontario Power Company of Niagara Falls and the Ontario Transmission Company at Niagara Falls, disputes have arisen as to the liability thereof to assessment and taxation, and litigation having ensued as to the same, it is desirable and expedient to adjust the said disputes and avoid further litigation;

And whereas for such purpose it has been agreed in settlement between the Council and the said Companies and the Hydro-Electric Power Commission of Ontario that the assessment and maximum rate of taxation of the said properties should be fixed at \$2,500,000 and thirty mills on the dollar respectively for a period of ten years from the 1st day of January, 1922, and thereupon such litigation shall cease, and it is necessary to pass this by-law to authorize an agreement embodying the terms of such settlement.

Therefore the Council of the Corporation of the City of Niagara Falls enacts as follows:—

1. That the Mayor and Clerk on behalf of the Corporation are hereby authorized to enter into, execute and deliver an Agreement (copy whereof is hereto annexed) between the Corporation and the said Companies and the said Commission to fix the assessment of the said properties of the said Companies at Niagara Falls at \$2,500,000 for all purposes and to fix the maximum rate of taxation thereon at thirty mills on the dollar for all purposes in any year of and for the period of ten years from the first day of January, 1922.

2. Nothing herein contained shall affect local improvement rates or taxes imposed or levied upon the said properties.

3. That this by-law and the said Agreement shall come into force and take and remain in effect upon and subject to the terms of the said Agreement for the said period upon the same receiving the assent of the Legislative Assembly of the Province of Ontario.

PASSED this second day of March, 1922.

(Sgd.) W. J. Seymour,
Clerk.

(Sgd.) Chas. R. Newman,
Mayor.

Seal.

This agreement made the day of One thousand nine hundred and twenty-two:
Between:

The Corporation of the City of Niagara Falls (Hereinafter called the "Corporation"),
of the first part;

The Ontario Power Company of Niagara Falls and the Ontario Transmission Company
Limited (Hereinafter called the "Companies"), of the second part;
and

The Hydro-Electric Power Commission of Ontario (Hereinafter called the "Commission"),
of the third part.

Whereas certain portions of the works, properties and undertakings of the Companies are situate within the City of Niagara Falls;

And whereas disputes have arisen between the parties hereto as to the liability of the said works, properties and undertakings to assessment and taxation, and certain litigation in respect thereof has ensued;

And whereas to settle and end such litigation, it has been agreed between the parties that the portions of the said works, properties and undertakings of the Companies within the said City shall be subject to a fixed assessment and a fixed maximum rate of taxation for a period of ten years from the first day of January, 1922, upon and subject to the terms hereinafter expressed:

Therefore this agreement in consideration of the premises and of the sum of one dollar of lawful money of Canada paid by each of the Companies and by the Commission to the Corporation (receipt whereof by the Corporation is hereby acknowledged) Witnesseth as follows:—

1. That for and during the period of ten years from the first day of January, 1922, all the real estate, works, properties and undertakings of the Companies situate within the City of Niagara Falls shall be annually assessed for all purposes (including school, business or other general or special municipal assessment) at the sum of \$2,500,000 for each and every of the said years, at which sum the annual assessment thereof is hereby fixed.

2. That for and during the said period of ten years all rates and taxes imposed in any year thereof by the Corporation for all purposes (including taxation for school purposes, business or other general or special municipal taxation) shall be imposed and levied as against the Companies and its said real estate, works, properties and undertakings on the said fixed assessment of \$2,500,000, and if in any such year it shall or may become necessary for the Corporation to impose or levy an aggregate rate or taxation in excess of thirty mills in the dollar for all purposes, (including taxation for school purposes, business or other general or special municipal taxation), then in such year the aggregate maximum rate or taxation which shall or may be imposed or levied on the said fixed assessment shall be thirty mills in the dollar and no more, at which the maximum annual aggregate levy of rate or taxation is hereby fixed and commuted. Provided always that if in any such year the annual aggregate levy of rate or taxation is less than thirty mills in the dollar for all said purposes, then such lesser rate or taxation only shall be imposed or levied on the said fixed assessment of \$2,500,000.

(a) Nothing in this Agreement contained shall affect local improvement rates or taxes imposed or levied upon the said properties.

3. That otherwise than aforesaid the said real estate, works, properties and undertakings of the Companies and the said Commission shall be exempt from assessment and taxation, the provisions of any statute of the Province of Ontario to the contrary notwithstanding.

4. That all litigation, present or pending, between the parties respecting the said assessment shall cease and be discontinued and each party thereto shall pay its own costs thereof.

5. The Companies and the Commission agree to pay to the Corporation the taxes for the year 1921 amounting to \$98,657.42 imposed and levied in respect of the said real estate, works, properties and undertakings of the Companies (less any sums paid on account thereof) in full payment of all liability to the Corporation for rates or taxation for all purposes up to and including the thirty-first day of December, 1921, the same to be paid forthwith after execution of this agreement.

6. The Companies and the Commission agree to pay to the Corporation in each year during the said period the annual taxes imposed and levied in accordance with the terms of this agreement as and when the same respectively become due and payable under the General Tax Levy and Tax Collection By-laws of the Corporation from time to time in force.

7. This agreement shall come into force and effect (and thereupon become retroactive to the first day of January, 1922) upon the same being ratified by the Legislative Assembly of the Province of Ontario.

In witness whereof the parties hereto have each caused its own Corporate seal to be affixed under the hands of their proper officers respectively.

Signed, Sealed and Delivered
in the presence of

The Corporation of the City of Niagara Falls.
.....*Mayor,*
.....*Clerk,*
The Ontario Power Company of Niagara Falls,
.....*President,*
.....*Secretary,*
The Ontario Transmission Company Limited,
.....*President,*
.....*Secretary,*
The Hydro-Electric Power Commission of
Ontario,
.....*Chairman,*
.....*Secretary,*

Chapter 144, 1922.

**An Act respecting the Sandwich, Windsor and
Amherstburg Railway**

Assented to May 4th, 1922.

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

Motor busses,
trackless
trolleys.

1. The Hydro-Electric Power Commission of Ontario may in connection with and as part of the Sandwich, Windsor and Amherstburg Railway, provide a service to meet the requirements of any particular locality by motor busses or cars operated by means of trackless trolleys, and for such purpose may purchase, maintain and operate motor busses, cars and trackless trolleys.

APPENDIX II

TRANSMISSION LINE RECORDS

including

Summaries of data respecting mileage of transmission lines built or acquired by the Hydro-Electric Power Commission. The sizes, materials, lengths and weights of conductors, and other particulars of the 110,000-volt steel-tower transmission lines, the wood-pole transmission lines and the telephone lines. Also detailed descriptions of the individual lines classified under the various systems.

TRANSMISSION LINE RECORDS

The total mileage of lines built and acquired by the Commission up to October 31, 1922, for the various systems, excepting rural 4,000-volt districts, is indicated in the following table:

TOTAL MILEAGE OF TRANSMISSION LINES

System	Miles
Niagara system—110,000-volt, steel-tower line.....	514.68
Niagara system—46,000-volt and less, steel and wood support (see table following)..	1,042.15
Ontario Power Company.....	91.46
Essex County system.....	58.53
Severn system.....	178.54
Eugenia system.....	295.76
Wasdells system.....	105.42
Muskoka system.....	26.32
St. Lawrence system.....	149.31
Rideau system.....	81.62
Thunder Bay system.....	84.72
Central Ontario and Trent system.....	484.78
Nipissing system.....	24.70
Total.....	3,137.99

Note: Of the above the Niagara system, the Ontario Power Company, and the Essex County system are operated at 25 cycles. The other systems are operated at 60 cycles.

110,000-VOLT STEEL-TOWER TRANSMISSION LINES

Niagara System

Lines completed and under construction to October 31, 1922. Completed 514.68 miles, under construction 7.34 miles. Total, 522.02 miles.

TOTAL MILEAGE OF 110,000-VOLT LINES AND NUMBER OF TOWERS

	To Oct. 31, 1921	Oct. 31, 1921 to Oct. 31, 1922	Total to Oct. 31, 1922
Total mileage completed.....	466.92	47.76	514.68
Total mileage under construction.....	.....	7.34	7.34
Total mileage of single circuit lines completed.....	140.34	.....	96.21
Total mileage of double circuit lines completed.....	326.58	91.89	418.47
Total mileage of double circuit lines under construction.....	.....	7.34	7.34
Number of towers erected.....	4,649	317	4,966
Number of towers under construction.....	.....	44	44

Note: During the year the second circuit has been added to a considerable part of the 110,000-volt Niagara system structures, so that there now remain three sections only having one circuit strung, namely, the London-St. Marys-Stratford sections where single circuit towers are used and the Stratford-Kitchener section which may be double circuited in the future. The Dundas-York structures now have space for one more 110,000-volt circuit.

TOTAL WEIGHTS AND MILEAGES OF CONDUCTORS

Cable	MILES OF CONDUCTOR			WEIGHT IN POUNDS		
	Completed to Oct. 31, 1921	Completed Oct. 31, 1921 to Oct. 31, 1922	Under construction Oct. 31, 1922	Completed to Oct. 31, 1921	Completed Oct. 31, 1921 to Oct. 31, 1922	Under construction Oct. 31, 1922
S.R.A.C. *	1,357.26	287.46	44.04	3,406,974	1,160,152	181,357
Copper...	945.66	.....	.....	2,822,089	.....	.....
Total..	2,302.92	287.46	44.04	6,229,063	1,160,152	181,357

* Steel-reinforced aluminum conductor.

110,000-VOLT STEEL-TOWER TRANSMISSION LINES—Continued

SIZE, MATERIAL, LENGTH AND WEIGHT OF CONDUCTORS

Size and Material	Miles of conductor			Weight in pounds			Miles of single-circuit lines			Miles of double-circuit lines			Total miles single-and-double-circuit completed Oct. 31, 1922
	Completed to Oct. 31, 1921	Completed Oct. 31, to Oct. 31, 1922	Under construction Oct. 31, 1922	Completed to Oct. 31, 1921	Completed Oct. 31, to Oct. 31, 1922	Under construction Oct. 31, 1922	Completed to Oct. 31, 1921	Completed Oct. 31, to Oct. 31, 1922	Under construction Oct. 31, 1922	Completed to Oct. 31, 1921	Completed Oct. 31, to Oct. 31, 1922	Under construction Oct. 31, 1922	
505,000cm., S.R.A.C.	.....	254.58	44.04	.....	1,048,360	181,357	....	....	....	....	42.28	7.34	42.28
500,000 c.m., “	.....	32.88	....	.....	111,792	.....	....	34.00	....	....	5.48	....	39.48
336,400 c.m., “	495.36	....	....	1,382,054	.....	.....	25.26	....	....	69.93	25.26	....	120.45
312,000 c.m., “	585.66	....	....	1,522,716	....	.....	25.09	....	....	85.66	....	....	110.75
266,800 c.m., “	276.24	....	....	502,204	....	.....	55.99	....	....	13.38	18.87	....	88.24
211,600 c.m., Copper	328.80	....	....	1,134,360	....	.....	....	....	....	54.80	....	....	54.80
167,800 c.m., “	616.86	....	....	1,687,729	....	.....	....	....	....	102.81	....	....	102.81
Total.....	2,302.92	287.46	44.04	6,229,063	1,160,152	181,357	106.34	34.00	....	326.58	91.89	7.34	558.81

Note: S.R.A.C.—steel-reinforced aluminum cable.

WOOD-POLE TRANSMISSION LINES**TOTAL MILEAGE OF WOOD-POLE LINES****In operation October 31, 1922**

System	Miles
Niagara system.....	1,042.15
Essex County system.....	1.13
Ontario Power Company system.....	1.00
Severn system.....	178.54
Eugenia system.....	295.76
Wasdells system.....	105.42
Muskoka system.....	26.32
St. Lawrence system.....	149.31
Rideau system.....	81.62
Central Ontario and Trent system.....	142.62
	2,023.87
110,000-volt wood-pole lines—Thunder Bay system.....	84.72
Total.....	2,108.59

WOOD-POLE LINES COMPLETED AND UNDER CONSTRUCTION**For Year Ended October 31, 1922****MILEAGES AT VARIOUS VOLTAGES**

Voltages	Miles completed during year	Miles under construction at October 31, 1922	Total miles
44,000	2.98	.....	2.98
30,000	1.00	.....	1.00
26,400	5.50	13.98	19.48
22,000	15.64	.....	15.64
13,200	.....	2.25	2.25
12,000	3.00	17.51	20.51
4,000	44.01	.....	44.01
2,300	0.13	.....	0.13
Total.....	72.26	33.74*	106.00

* All in Niagara system, does not include lines in Rural power districts.

MILEAGES FOR THE VARIOUS SYSTEMS

System	Miles
Niagara system.....	73.75
Essex County system.....	1.13
Ontario Power Company system.....	1.00
Severn system.....	0.41
Eugenia system.....	0.05
Wasdells system.....	26.68
Muskoka system.....	.....
St. Lawrence system.....	2.60
Rideau system.....	.....
Thunder Bay system.....	.....
Central Ontario and Trent system.....	0.38
Total.....	106.00

Span miles: single circuit, 97.13, double circuit, 8.87, total, 106.00

MATERIAL AND MILEAGE OF CONDUCTORS

Power Conductors:	MILES
Steel-reinforced aluminum.....	45.13
Aluminum.....	3.11
Copper.....	25.04
Steel.....	32.72
Total.....	106.00

Ground Wires and Cables:	
1/4" steel cable.....	23.00
9/32" " ".....	0 05
5/16" " ".....	7.03
3 x 13" B.W.G. steel cable.....	10.60
No. 6 B. & S.G. copper wire.....	0.14
Total.....	40.82

Ground Cable:	
Steel.....	40.68
Iron.....	.....
Copper.....	0.14
Total.....	40.82

Telephone Wire:	
3 x 13 B.W.G. galvanized steel.....	2.60
No. 6 B. & S.G. steel-reinforced aluminum.....	3.56
No. 10 B. & S.G. copper-clad steel.....	4.44
No. 9 B.W.G. galv. iron.....	16.05
Total.....	26.65

Aluminum Conductor:	
No. 2/0 B.&S.G. steel reinforced.....	18.85
No. 3/0 " ".....	0.41
No. 4/0 " ".....	2.98
105,530 c.m. " ".....	1.00
No. 2 B.&S.G. " ".....	21.89
No. 3/0 B.&S.G. aluminum.....	3.11
Total.....	48.24

Copper Conductor:	
No. 1 B.&S.G. copper.....	3.00
No. 2 " ".....	4.60
No. 4 " ".....	2.20
No. 6 " ".....	15.11
350,000 c.m. ".....	0.13
Total.....	25.04

Steel Conductor:	
5/16" galv. steel.....	32.72
Total.....	32.72

Note: Average spans between poles: 120 ft., 125 ft., 132 ft., 150 ft., 160 ft., and 175 ft.

WOOD-POLE TRANSMISSION AND TELEPHONE LINES

TOTAL MILEAGE OF LINES AND NUMBER OF POLES

Lines	Miles completed		
	To Oct. 31, 1921	Oct. 31, 1921 to Oct. 31, 1922	Totals to Oct. 31, 1922
Low-tension lines completed.....	2,036.33	72.26	2,108.59
Low-tension lines under construction.....	.....	33.74	33.74
Single-circuit lines completed.....	1,554.85	66.05	1,620.90
Double-circuit lines completed.....	455.27	6.21	461.48
Three-circuit lines completed.....	5.74	.....	5.74
Four-circuit lines completed.....	20.47	.....	20.47
Single-circuit telephone lines completed.....	1,567.49	23.99	1,591.48
Double-circuit telephone lines completed.....	68.20	.....	68.20
Three-circuit telephone lines completed.....	0.76	.....	0.76
Telephone lines under construction.....	.....	2.66	2.66
Poles and Towers			
Number of poles erected.....	76,898	2,142	79,040
Number of towers erected.....	428	.....	428
Number of poles under construction.....	.....	787	787

TOTAL MILEAGE AND WEIGHT OF CABLE AND WIRE

Cable and wire	Miles of conductor				Weight in pounds			
	Completed to Oct. 31, 1921	Completed Oct. 31, 1921 to Oct. 31, 1922	Under construction Oct. 31, 1922		Completed to Oct. 31, 1921	Completed Oct. 31, 1921 to Oct. 31, 1922	Under construction Oct. 31, 1922	
Aluminum: Transmission.....	3,507.51	5.16	13.50		2,554,210	4,303	11,259	
Steel-reinforced { Transmission.....	2,290.47	88.23	53.76		1,853,523	58,111	53,087	
aluminum { Telephone.....	345.77	7.12	.....		66,388	1,367	.....
Copper wire: Transmission.....	1,233.45	75.12	.....		1,750,223	51,079	.....
Telephone.....	137.16	.....	.....		22,741	.....	.....
Copper-clad steel: Telephone.....	1,235.80	4.38	4.50		208,802	675	693	
Galv. iron wire: Transmission.....	167.28	.....	.....		95,852	.....	.....
Telephone.....	1,489.96	31.28	0.82		443,400	9,540	250	
Galv. steel cable: Transmission.....	510.48	66.90	41.94		515,794	72,252	42,865	
Telephone.....	343.38	5.20	.....		140,013	2,574	.....
Total.....	11,261.26	283.39	114.52		7,650,946	199,901	108,154	

Note: This table does not include the Niagara System 110,000-volt, steel-tower lines.

WOOD-POLE TRANSMISSION LINES—Continued
MILEAGES TABULATED ACCORDING TO VOLTAGE AND NUMBER OF CIRCUITS

Voltage	Single circuit totals		Double circuit totals		Three circuit totals		Four circuit totals		1, 2, 3, and 4 circuit totals			
	Com- pleted to Oct. 31, 1921	Under con- struc- tion Oct. 31, 1922	Com- pleted to Oct. 31, 1921	Under con- struc- tion Oct. 31, 1922	Com- pleted to Oct. 31, 1921	Under con- struc- tion Oct. 31, 1922	Com- pleted to Oct. 31, 1921	Under con- struc- tion Oct. 31, 1922	Com- pleted to Oct. 31, 1921	Under con- struc- tion Oct. 31, 1922	Com- pleted to Oct. 31, 1921	Under con- struc- tion Oct. 31, 1922
110,000	75.61	...	...	...	...	...	...	...	75.61	...	...	...
46,000}	291.98	2.60	5.25	...	...	...	15.53	...	312.76	...	2.98	...
44,000}	...	...	...	...	...	...	...	...	...	...	...	...
40,000}	...	...	...	...	...	...	...	...	...	...	...	...
30,000	...	...	...	...	...	...	...	...	...	...	1.00	1.00
26,400	309.35	1.13	146.68	4.37	1.48	...	1.10	...	458.61	...	5.50	13.98
22,000	243.89	15.18	188.80	0.46	0.76	...	...	...	433.45	...	15.64	...
13,200	276.27	...	109.86	...	3.50	...	3.84	...	393.47	...	...	2.25
12,000	12.22	3.00	4.68	0.41	...	...	...	...	16.90	3.00	...	17.51
6,600	16.28	...	...	...	...	...	...	...	16.28	...	...	...
4,000	293.71	44.01	...	...	...	...	...	...	293.71	44.01	...	...
2,300	22.78	0.13	...	...	...	...	...	...	22.78	0.13	...	...
2,200	12.76	...	...	...	...	...	...	...	12.76	...	...	...
Total.....	1,554.85	66.05	455.27	6.21	5.74	...	20.47	...	2,036.33	72.26	...	33.74
												2,108.59

NOTE:—This sheet is based on route miles.

WOOD-POLE

GAUGE LENGTH AND WEIGHT

Size and material of conductor	Miles of conductor			Weight in pounds			Miles—Single circuit lines		
	Completed to Oct. 31, 1921	Completed Oct. 31, 1921 to Oct. 31, '22	Under construction Oct. 31, 1922	Completed to Oct. 31, 1921	Completed Oct. 31, 1921 to Oct. 31, 1922	Under construction Oct. 31, 1922	Completed to Oct. 31, 1921	Completed Oct. 31, 1921 to Oct. 31, '22	Under construction Oct. 31, 1922
No. 2. B. & S.G. alum	461.85			151,949					
No. 1/0 B. & S.G. alum	543.21			284,642			110.49		
No. 2/0 B. & S.G. alum	116.58			76,360			13.48		
No. 3/0 B. & S.G. alum	2,150.79	5.16	13.50	1,793,759	4,303	11,259	276.31		
173,000 c.m. alum	6.30			5,632					
No. 4/0 B. & S.G. alum	215.40			226,170			12.00		
345,000 c.m. alum	9.18			15,698					
No. 6 B. & S.G. S.R. alum	9.69			1,860			3.23		
No. 2 B. & S.G. S.R. alum	1,075.89	66.90		525,034	32,647		319.79	21.48	
No. 1/0 B. & S.G. S.R. alum	444.87			340,770			142.49		
105,530 c.m. S.R. alum		6.00			4,656				
125,000 c.m. S.R. alum	233.34			214,673			77.78		
No. 2/0 B. & S.G. S.R. alum	37.02	5.25	51.30	36,132	5,124	50,069		1.75	17.10
No. 3/0 B. & S.G. S.R. alum	129.15		2.46	158,467		3,018	31.39		
No. 4/0 B. & S.G. S.R. alum	347.82	10.08		541,208	15,684		115.94	2.60	
No. 6/0 B. & S.G. S.R. alum	4.98			13,884			1.66		
336,000 c.m. S.R. alum	7.71			21,495			2.57		
No. 6 B. & S.G. copper	457.05	45.47		195,617	19,461		152.35	15.25	
No. 4 B. & S.G. copper	166.32	6.60		113,098	4,488		53.02	2.20	
No. 3 B. & S.G. copper	6.48			5,560					
No. 2 B. & S.G. copper	60.72	13.80		65,699	14,932		13.44	4.60	
No. 1 B. & S.G. copper		9.00			12,258			3.00	
350,000 c.m. copper		0.39		2,214				0.13	
No. 1/0 B. & S.G. copper	217.53			374,152			50.71		
No. 2/0 B. & S.G. copper	98.67			214,051			32.89		
No. 4/0 B. & S.G. copper	226.68			782,046					
3 x 13 B. & S.G. galv. steel		10.60			3,975			10.60	
4 x 12 B. & S.G. galv. steel	7.12			4,699					
3 x 12 B. & S.G. galv. steel	45.24			22,394			12.13		
1/4" galv. steel	1,407.20	23.00		970,968	15,870		22.33	23.00	
9/32" galv. steel	404.82	0.05		344,097	42		28.42	0.05	
5/16" galv. steel	365.62	71.68	44.19	394,870	77,414	47,725	96.78	19.96	16.23
7/16" galv. steel	31.50			65,520					
No. 8 B. & S.G.C.C. steel	0.89			218					
No. 9 B.W.G. iron				1,382					
No. 10 B.W.G. iron	5.53			170,909			55.76		
No. 6 B.W.G. iron	298.27								
Total	9,593.42	273.98	111.45	8,135,227	210,854	112,071	1,624.96	104.62	33.33

NOTE.—This sheet is based

TRANSMISSION LINES—Continued

OF CONDUCTORS, INCLUDING GROUND CABLES

Miles—Double circuit lines				Miles—Three circuit lines				Miles—Four circuit lines				Total miles of single, double, three and four circuit lines completed to Oct. 31, 1922
Completed to Oct. 31, 1921	Completed Oct. 31, 1921 to Oct. 31, 1922	Under construction Oct. 31, 1922		Completed to Oct. 31, 1921	Completed Oct. 31, 1921 to Oct. 31, 1922	Under Construction Oct. 31, 1922		Completed to Oct. 31, 1921	Completed Oct. 31, 1921 to Oct. 31, 1922	Under construction Oct. 31, 1922		
30.38				2.19								32.57
34.81				0.08				0.18				145.56
12.69												26.17
218.11	0.86	2.25						1.10				496.38
1.05												1.05
29.90												41.90
1.53												1.53
												3.23
19.42	0.41											361.10
2.90												145.39
	1.00											1.00
												77.78
6.17												7.92
5.83		0.41										37.22
	0.38											118.92
												1.66
												2.57
												167.60
1.21												56.43
1.08												1.08
3.40												21.44
												3.00
												0.13
10.90												61.61
												32.89
1.02								18.38				19.40
												10.60
												12.13
												45.33
												28.47
	3.56											120.30
5.25												5.25
												55.76
385.65	6.21	2.66	2.27					19.66				2,143.37

on circuit and wire miles.

STEEL-TOWER AND WOOD-POLE TRANSMISSION LINES

TOTAL MILEAGES AND WEIGHTS OF CONDUCTORS—ALL SYSTEMS

Type of construction	Miles of conductor			Weight in pounds		
	Completed to Oct. 31, 1922	Completed Oct. 31, 1921, to Oct. 31, 1922	Under construction Oct. 31, 1922	Completed to Oct. 31, 1921	Completed Oct. 31, 1921, to Oct. 31, 1922	Under construction Oct. 31, 1922
110,000-volt steel-tower lines.....	2,302.92	287.46	44.04	6,229,063	1,160,152	181,357
Wood-pole lines built by Commission.....	7,709.19	235.41	109.20	6,769,602	185,745	107,211
Total.....	10,012.11	522.87	153.24	12,998,665	1,345,897	288,568

NOTE:—This table does not include the rural power districts.

TELEPHONE LINES

MILEAGE AND SIZES OF WIRE USED ON TELEPHONE LINES For Year Ended October 31, 1922

Section No.	Miles	Gauge and material
Lines completed		
N 1477 x 48	3.56	No. 9 B.W.G. galvanized iron.
N 1483 x 23	0.81	No. 10 B. & S.G. copper-clad steel.
N 179 x 19	1.00	No. 10 B. & S.G. copper-clad steel.
S 51 x 11	0.41	No. 9 B.W.G. galvanized iron.
E 57 x 29	0.05	No. 9 B.W.G. galvanized iron.
L 72 x 22	2.60	No. 3 x 12 galvanized iron.
W 3 x 7	15.18	No. 9 B.W.G. galvanized iron.
C 10 x 60	0.38	No. 10 B. & S.G. copper-clad steel.
Total.....	23.99	

Lines under construction October 31, 1922

N 163 x 9	0.41	No. 9 B.W.G. galvanized iron.
N 16 x 1664	2.25	No. 10 B. & S.G. copper-clad steel.
Total.....	2.66	

TELEPHONE LINES
GAUGE, LENGTH AND WEIGHT OF ALUMINUM, COPPER-CLAD STEEL AND GALVANIZED IRON WIRE

Size and material of conductor	Miles of conductor				Weight in pounds				Single circuit mileage		Double circuit mileage		Three circuit mileage		1, 2 & 3 circuit totals
	Completed to Oct. 31, 1921	Completed to Oct. 31, 1921	Under construction to Oct. 31, 1922	Completed to Oct. 31, 1922	Completed to Oct. 31, 1921	Under construction to Oct. 31, 1922	Completed to Oct. 31, 1921	Under construction to Oct. 31, 1922	Completed to Oct. 31, 1921	Under construction to Oct. 31, 1922	Completed to Oct. 31, 1921	Under construction to Oct. 31, 1922	Completed to Oct. 31, 1921	Under construction to Oct. 31, 1922	
No. 8 B.&S.G. C.C. steel.	203.18	.....	.....	203.18	49,779	.....	.....	49,779	101.59	.....	.....	.....	.....	.....	101.59
No. 10 B.&S.G. C.C. steel	1,032.62	4.38	4.50	1,037.00	159,023	675	693	159,698	516.31	2.19	2.25	.....	.....	.....	518.50
No. 10 B.&S.G. copper...	137.16	.....	.....	137.16	22,741	.....	.....	22,741	68.58	.....	.....	.....	.....	.....	68.58
No. 8 B.W.G. galv. iron..	5.70	.....	.....	5.70	2,155	.....	.....	2,155	2.85	.....	.....	.....	.....	.....	2.85
No. 9 B.W.G. galv. iron..	1,352.66	31.28	.82	1,383.94	412,561	9,540	250	422,101	685.52	15.64	.41	.....	.....	.....	701.16
No. 10 B.W.G. galv. iron..	82.00	.....	.....	82.00	20,500	.....	.....	20,500	41.00	.....	.....	.....	.....	.....	41.00
No. 12 B.W.G. galv. iron..	49.60	.....	.....	49.60	8,184	.....	.....	8,184	24.80	.....	.....	.....	.....	.....	24.80
No. 3x12 B.&S.G. galv. stl.	93.72	5.20	.....	98.92	46,391	2,574	.....	48,965	46.86	2.60	.....	.....	.....	.....	49.46
No. 3x13 B.&S.G. galv. stl.	249.66	.....	.....	249.66	93,622	.....	.....	93,622	124.83	.....	.....	.....	.....	.....	124.83
No. 6 B.&S.G.S-R. alumin.	345.77	7.12	.....	352.89	66,388	1,367	.....	67,755	65.79	3.56	.....	28.84	.....	.....	98.19
Total.....	3,552.07	47.98	5.32	3,600.05	881,344	14,156	943	895,500	1,678.13	23.99	2.66	28.84	.....	.....	1,730.96

ONTARIO POWER COMPANY

TABULATION OF TRANSMISSION AND TELEPHONE LINES

Total mileage of Ontario Power Company's lines.....	91.46
Total number of poles erected.....	3,685
Total number of steel towers erected.....	145
Total mileage of single-circuit lines.....	16.44
Total mileage of double-circuit lines.....	75.02

SIZE, MATERIAL, LENGTH AND WEIGHT OF CONDUCTOR

Size and material	Span miles	Wire miles	Weight in pounds
Aluminum conductor:			
173,000 c.m.....	7.86	42.93	38,379
211,950 c.m.....	5.50	33.00	34,650
345,000 c.m.....	41.81	250.86	428,971
500,000 c.m.....	13.98	83.88	208,022
820,000 c.m.....	12.23	36.69	148,961
Total.....	81.38	447.36	858,983
Steel-reinforced aluminum:			
105,530 c.m.....	1.00	6.00	4,656
336,400 c.m.....	1.23	7.38	20,575
Total.....	2.23	13.38	25,231
Copper conductor:			
No. 2/0 B. & S.G.....	2.40	14.40	31,234
No. 3 B. & S.G.....	5.00	21.60	18,533
No. 6 B. & S.G.....	0.45	2.70	1,156
Total.....	7.85	38.70	50,923
Telephone line—galvanized iron:			
No. 9 B.W.G.....	1.20	2.40	732
No. 12 B.W.G.....	57.61	115.22	19,011
Telephone line—copper:			
No. 12 B. & S.G.....	11.73	23.46	2,463
Telephone line—copper-clad steel:			
No. 10 B. & S.G.....	1.00	2.00	308
Total.....	71.54	143.08	22,514

ONTARIO POWER COMPANY LINES—Continued

TOTAL MILEAGE AND WEIGHT OF CABLE

Cable	Miles of cable	Weight in pounds
Aluminum.....	447.36	858,983
S.R. aluminum.....	13.38	25,231
Copper.....	38.70	50,923
Total.....	499.44	935,137

TOTAL MILEAGE AND WEIGHT OF TELEPHONE WIRE

Wire	Miles of wire	Weight in pounds
Galvanized iron.....	117.62	19,743
Copper.....	23.46	2,463
Copper-clad steel.....	2.00	308
Total.....	143.08	22,514

MILEAGE OF LINES TABULATED ACCORDING TO VOLTAGE AND NUMBER OF CIRCUITS

Voltage	Single circuit total miles	Double circuit total miles	Combined single and double circuit total miles
60,000.....	12.23	.....	12.23
30,000.....	.....	22.10	22.10
12,000.....	4.21	52.92	57.13
Total.....	16.44	75.02	91.46

SIZE, LENGTH AND WEIGHT OF CONDUCTORS IN TRANSMISSION LINES

Size and material	Miles of conductor	Weight in pounds	Miles of single circuit lines	Miles of double circuit lines	Miles of single and double circuit lines
173,000 c.m. alum.....	42.93	38,379	1.41	6.45	7.86
211,950 " ".....	33.00	34,650	.....	5.50	5.50
345,000 " ".....	250.86	428,971	.....	41.81	41.81
500,000 " ".....	83.88	208,022	.....	13.98	13.98
820,000 " ".....	36.69	148,961	12.23	.....	12.23
105,530 c.m. S.R. alum..	6.00	4,656	.....	1.00	1.00
336,400 " ".....	7.38	20,575	.....	1.23	1.23
2/0 B. & S.G. copper....	14.40	31,234	.....	2.40	2.40
No. 3 " ".....	21.60	18,533	2.80	2.20	5.00
No. 6 " ".....	2.70	1,156	.....	0.45	0.45
Total.....	499.44	935,137	16.44	75.02	91.46

SIZE, LENGTH AND WEIGHT OF TELEPHONE LINES

Size and material	Wire miles	Weight in pounds	Single circuit total miles
No. 9 B.W.G. galvanized iron wire.....	2.40	732	1.20
No. 12 B.W.G. galvanized iron wire.....	115.22	19,011	57.61
No. 12 B. & S.G. copper wire.....	23.46	2,463	11.73
No. 10 B. & S.G. copper clad steel.....	2.00	308	1.00
Total.....	143.08	22,514	71.54

DESCRIPTION

NIAGARA SYSTEM—110,000-VOLT,

New section number	Old section number	From	To	Aver. span feet	Miles	No. of towers
N1 x 2	A	Niagara trans. sta.	Dundas trans. sta.	550	51.43	570
N1 x 2	AA	" " "	" " "	630	50.00	451
N2 x 13	Pt. B1 & B2	Dundas " "	Cooksville " "	550	27.20	295
N13 x 16	Pt. B1 & B3	Cooksville " "	York " "	550	6.73	74
N16 x 3	Pt. B1 & B4	York " "	Toronto " "	550	5.10	62
N2 x 16	BB	Dundas " "	York " "	630	34.00	300
N2 x 12	C	Dundas " "	Brant " "	550	22.65	251
N12 x 10	D	Brant " "	Woodstock " "	550	21.83	231
N10 x 4	E	Woodstock " "	London " "	550	25.45	278
N2 x 5	F	Dundas " "	Guelph " "	550	25.26	268
N5 x 6	P-1	Guelph " "	Preston " "	550	10.73	115
N6 x 7	P-2	Preston " "	Kitchener " "	550	8.14	91
N7 x 8	H	Kitchener " "	Stratford " "	550	25.09	267
N8 x 9	I	Stratford " "	St. Marys " "	550	13.53	147†
N9 x 4	J	St. Marys " "	London " "	550	23.59	250†
N4 x 11	K	London " "	St. Thomas " "	550	13.38	141
N11 x 14	L	St. Thomas " "	Kent " "	660	58.04	486
N14 x 15	M	Kent " "	Essex " "	660	44.77	374
N20 x 50	..	Queenston gen. sta.	Struct. at forebay	3 spans	0.10	3
N50 x 51	..	Struct. at forebay	Niagara trans. sta.	550	5.48	58
N50 x 53	..	Struct. at forebay	Saltfleet jct. N53	880	39.48	255
N53 x 17	..	Saltfleet jct. N53	Hamilton trans. sta.	...	.....	1
Total mileage.....					511.98	

Lines under

N53 x 52	..	Saltfleet jct.	Nelson jct.	880	7.34	44
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* NOTE.—Section "A" has 50 miles of 312,000 c.m. S.R.A.C. and 1 mile of 211,600 c.m. Section "N16 x 3" has 1.30 miles of 312,000 c.m. S.R.A.C. and 3.80 miles of Section "N7 x 8" has 23.90 miles of 312,000 c.m. S.R.A.C. and 1.19 miles of †Sections "N8 x 9" and "N9 x 4" single circuit towers only. All other sections

OF LINES

25-CYCLE, STEEL-TOWER LINES

No. of circuits	Size and material of power cable	Size and material of ground cable	Date placed in operation	Size and material of original conductors	Date of last stringing
2	312,000 c.m. S.R.A.C. *	5/16" steel	Oct., 1910	4/0 aluminum.	Dec., 1918
2	211,600 c.m. copper	" "	Feb., 1915	211,600 c.m. copper	.....
2	312,000 c.m. S.R.A.C.	" "	Mar., 1911	3/0 aluminum	Oct., 1917
2	312,000 c.m. "	" "	Mar., 1911	3/0 "	Oct., 1917
2	312,000 c.m. " *	" "	Mar., 1911	3/0 "	Oct., 1917
1	500,000 c.m. "	" "	.....	.....	.....
2	336,400 c.m. "	" "	Nov., 1910	3/0 "	Oct., 1914
2	336,400 c.m. "	" "	Nov., 1910	3/0 "	Oct., 1914
2	336,400 c.m. "	" "	Dec., 1910	3/0 "	Oct., 1914
2	336,400 c.m. "	" "	Oct., 1910	3/0 "	June, 1915
2	266,800 c.m. "	" "	Oct., 1910	3/0 "	June, 1915
2	266,800 c.m. "	" "	Oct., 1910	3/0 "	June, 1915
1	312,000 c.m. " *	" "	Dec., 1910	3/0 "	Dec., 1919
1	266,800 c.m. "	" "	Dec., 1910	3/0 "	June, 1915
1	266,800 c.m. "	Removed	Dec., 1910	3/0 "	June, 1915
2	266,800 c.m. "	5/16" steel	Dec., 1910	3/0 "	Oct., 1913
2	167,800 c.m. copper	" "	Aug., 1914	167,800 c.m. copper	Aug., 1914
2	167,800 c.m. "	" "	Aug., 1914	167,800 c.m. copper	Aug., 1914
5	605,000 c.m. S.R.A.C.	None	Jan., 1922	605,000 c.m. S.R.A.C.	Jan., 1922
2	500,000 c.m. "	7/16" steel	Jan., 1922	500,000 c.m. S.R.A.C.	Jan., 1922
2	605,000 c.m. "	5/16" "	Oct., 1922	605,000 c.m. S.R.A.C.	Oct., 1922
2	605,000 c.m. "	5/16" "	Oct., 1922	605,000 c.m. S.R.A.C.	Oct., 1922

construction

2	605,000 c.m. S.R.A.C.	5/16" steel
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copper.
211,600 c.m. copper from limits to Toronto Sub.
266,800 c.m. S.R.A.C.
double circuit towers.

DESCRIPTION
NIAGARA SYSTEM—HIGH-TENSION

New section number	Old section number	From	To	Avg. height of pole in feet	Avg. span in feet	Miles
N1 x 2	A	Niagara trans. sta.	Dundas trans. sta.	30	132	54.16
N1 x 2	AA	" " "	" " "	30	132	50.00
N2 x 13 N13 x 16 N16 x 3	B	Dundas " "	Toronto city limits	30	132	35.87
N2 x 16	BB	" " "	York trans. sta.	30	132	.....
N2 x 12	C	" " "	Brant " "	30	132	22.90
N12 x 10	D	Brant " "	Woodstock " "	30	132	21.53
N10 x 4	E	Woodstock " "	London " "	30	132	26.03
N2 x 5	F	Dundas " "	Guelph " "	30	132	26.12
N5 x 6	P-1	Guelph " "	Preston " "	30	132	12.78
N6 x 7	P-2	Preston " "	Kitchener " "	30	132	9.09
N7 x 8	H	Kitchener " "	Stratford " "	30	132	28.75
N8 x 9	I	Stratford " "	St. Marys " "	30	132	15.28
N9 x 4	J	St. Marys " "	London " "	30	132	27.81
N4 x 11	K	London " "	St. Thomas " "	30	132	16.09
N11 x 14	L	St. Thomas " "	Kent " "	30	132	58.04
N14 x 15	M	Kent " "	Essex " "	30	132	44.77
N20 x 1	....	Queenston gen. sta.	Niagara " "	25	150	6.16
N20 x 25	....	" " "	Ont. Power Co. D.S.	25	150	6.05
			Total mileage...	.....	.....	461.43

NOTE.—Old relay of No. 12 B. & S.G. copper not in use.
* N20 x 25 carried on 204 O.P.Co. poles and 15 H.E.P.C. poles—Total of 219 poles.

OF LINES

TELEPHONE AND RELAY LINES

No. of poles	No. of circuits	Number, size and material of conductors	Date placed in operation	Size of original wire	Altered wire	Remarks
2,204	4	{2-No. 9 B. & S.G. copper	1910			
1,405	1	{2-No. 10 " "	1915			
		No. 9 " "				
1,519	4	{2-No. 9 " "	1910			
		{2-No. 8 B. & S.G. c.c. steel				
...			
957	2	{1-No. 9 B. & S.G. copper	1910			
		{1-No. 10 " "				
888	2	{1-No. 9 " "	1910			
		{1-No. 10 " "				
1,074	2	{1-No. 10 " "	1910			
		{1-No. 11 " "				
1,093	1	1-No. 10 " "	1910			
535	1	1-No. 10 " "	1910			
400	1	1-No. 10 " "	1910			
1,164	1	1-No. 10 " "	1910			
634	1	1-No. 10 " "	1910			
1,204	2	{1-No. 10 " "	1910			
		{1-No. 11 " "				
696	2	{1-No. 10 " "	1910			
		{1-No. 12 " "				
2,370	2	No. 9 " "	1914			
1,829	2	No. 9 " "	1914			
225	2	No. 9 B. & S.G. h.d. copper	1921			
219*	1	No. 9 " " "	1922			

One
circuit
removed
1922

DESCRIPTION

NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
Lines terminating								
N. 161 x 1	L. T. 75	Jct. Tower No. 308N161	Welland sub-sta.....	48	250	0.53	10*	46,000
114 x 2	{N.C.R 136-1	St. Catharines mun. sta.	Port Dalhousie.....	30	120	3.18	140	2,200
175 x 5		Pole No. 52 LT 162....	Stamford Tp. sta.....	35	150	0.69	26	12,000
166 x 6		S.W. Pole No. 100 N166	Niagara-on-the-Lake..	30	125	7.83	334	12,000
167 x 7		Pole No. 115 N167....	Nat. Abrasive Co.....	.....	.....	0.05	3	12,000
169 x 9		Pole No. 88 N169.....	Niagara Falls mun. sta	35	120	1.08	55	12,000
161 x 10	74	Tower No. 308 N161 ..	Union Carbide Co.....	48	250	1.93	49*	46,000
171 x 11	164	Tower No. 330 N171...	Dunnville mun. sta...	35	176	21.54	672	46,000
174 x 14	176	Tower No. 118 N174...	St. Catharines mun. sta	.....	.....	.....	.....	.....
176 x 16	168	Pole No. 52 N176.....	Queenston Quarry....	35	120	0.41	18	12,000
177 x 17	170	Pole No. 72 N 177....	St. Davids.....	35	120	0.08	2	12,000
101 x 21	.....	Welland mun. sta.....	Welland County Rock Crusher.....	30	160	5.51	211	2,300

*Towers

Lines terminating

25 x 160	.....	O.P. dist. sta.....	Jct. N160 at Allen & Murray St.....	.....	.....	0.31	.....	.....
170 x 61	74	Tower No. 118 N170...	Tower No. 308 N161..	48	250	8.59	190*	46,000
173 x 65	162	Pole No. 147 N173....	Sw. Pole No. 206 N165	35	100	1.13	59	12,000
177 x 66	171	Pole No. 72 N177.....	Sw. Pole No. 100 N166	35	120	0.55	26	12,000
169 x 67	162	Pole No. 88 N169.....	Pole No. 115 N167....	35	100	0.53	27	12,000
101 x 71	164-A	Welland Tower No. 320	Tower No. 330 N171..	48	250	0.53	11	46,000
167 x 73	162	Pole No. 115 N167....	Pole No. 147 N173....	35	100	0.52	32	12,000
165 x 76	167	S.W. Pole No. 206 N165	Pole No. 52 N176....	35	120	1.40	52	12,000
176 x 77	169	Pole No. 52 N176.....	Pole No. 72 N177....	35	120	0.44	20	12,000
1 x 170	73	Nia. trans. sta.....	Tower No. 118 N170..	48	250	5.01	118*	46,000
1 x 174	175	Nia. trans. sta.....	Tower No. 118 N174..	.....	.....	5.25	.....	46,000
20 x 173	...	Queenston gen. sta....	Pole No. 146 N173....	35	132	3.00	127	12,000
160 x 75	162	Tap O.P. Co.Line N160	Pole No. 52 N175....	35	100	0.75	38	12,000
175 x 69	162	Pole No. 52 N175.....	Pole No. 88 N169....	35	100	0.77	36	12,000

Note: For inter-connected lines at 12,000 volts, see Ontario Power Co. System Sheet "A"

*Towers

F LINES

IAGARA DISTRICT—SYMBOL N1

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
t customers						
2	2/0 B.&S.G. copper	8 B.&S.G. c.c. steel	1/4" galv. steel	O.B. San. & Keokuk, C.P. 356	July 11, 1914	Oct. 17, 1914
1	1/0 B. & S.G. alum.	None	None	.....	Oct. 16, 1912	Nov. 17, 1912
1	2 B. & S.G.s.r. alum	9 B.W.G. galv. iron	None	O.B. 12546	May 10, 1921	July 3, 1921
1	6 B. & S.G. copper	None	None	.....	.....	.....
1	1 " "	None	None	.....	.....	.....
2	3 " "	9 B.W.G. galv. iron	Built by O.P. Co.	Vic. 407	.....	Nov. 4, 1906
4	4/0 B.&S.G. copper	8 B.&S.G. c.c. steel	1/4" galv. steel	O.B. San. & Keokuk, C.P. 1725	Mar. 15, 1914	Aug. 20, 1914
1	5/16" galv. steel	9 B.W.G. galv. iron	1/4" galv. steel	J.D. Insul.	Aug. 17, 1917	Mar. 21, 1918
1	6 B. & S.G. copper	.....	Built by O.P.Co.	Vic. 407	.....	.....
1	6 " "	.....	" " "	Vic. 407	.....	.....
1	2 B. & S.G.s.r. alum	.....	3 x 13 galv. steel	C.P. 105	July 17, 1921	Sept. 22, 1921

t junctions

4	4/0 B.&S.G. copper	8 B.&S.G. c.c. steel	1/4" galv. steel	O B. San. & Keokuk, C.P. 106	Mar. 15, 1914	Aug. 20, 1914
1	4 " "	12 B.W.G.galv.iron	Built by O.P.Co.	Vic. 407	.....	.....
1	6 " "	.....	" " "	.....	.....	.....
2	173,000 c.m. alum.	12 B.W.G.galv.iron	" " "	.....	.....	.....
2	2/0 B.&S.G. copper	8 B. & S.G.c.c.steel	1/4" galv. steel	O B. San. & Keokuk, C.P. 1725	July 11, 1914	Oct. 17, 1914
2	173,000 c.m. alum.	12 B.W.G.galv.iron	Built by O.P.Co.	Vic. 407	.....	.....
1	6 B. & S.G. copper	.....	" " "	Vic. 407	.....	.....
1	6 " "	.....	" " "	Vic. 407	.....	.....
4	4/0 " "	8 B.&S.G.c.c. steel	1/4" galv. steel	O.B. San. & Keokuk, C.P. 356	Mar. 15, 1914	Aug. 20, 1914
2	7/16" galv. steel	.....	.....	C.P. 1725	Nov. 13, 1917	.....
1	1 B. & S.G. copper	None	None	C.P. 793	.....	May 30, 1922
2	345,000 c.m. alum.	12 B.W.G.galv.iron	None	Built by O.P. Co.	.....	.....
2	345,000 " "	12 " " "	None	Built by O.P. Co.	.....	.....

DESCRIPTION

NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
Lines terminating								
N. 2 x 201	L.T. 1	Dundas trans. sta.....	Hamilton mun. sta....	50½	206	2.85	73	13,200
264 x 2	118	Pole No. 82, N264.....	Dundas mun. sta.....	55	120	0.12	7	13,200
235 x 6	40&40A	Dom. Sewer Pipe Co...	Waterdown dist. sta...	35	120	3.43	72	2,200
237 x 7	61	Caledonia dist. sta.....	Caledonia.....	.....	.....	0.30	.....	2,200
237 x 8	47A	Caledonia dist. sta.....	Alabastine Co.....	.....	.....	0.17	.....	2,200
270 x 10	50	Pole No. 941 N270....	Ont. Gypsum Co.....	40	120	5.91	229	13,200
202 x 11	209	Dundas mun. sta.....	Copetown.....	35	132	5.98	5	2,200

Lines terminating

271 x 34	129	Pole No. 328, N271....	Lynden dist. sta.....	35	132	4.53	185	13,200
266 x 35	38	Pole No. 260, N266....	Dom. Sew. Pipe Co. sta.	40	120	1.93	90	13,200
2 x 237	47	Dundas tran. sta.....	Caledonia dist. sta....	40	120	14.97	669	13,200
270 x 39	49	Pole No. 941, N270....	Hagersville dist. sta...	40	120	3.85	173	13,200

Lines terminating

2 x 263	43	Dundas trans. sta.....	Pole No. 69, N263....	40	120	1.21	65	13,200
263 x 64	118	Pole No. 69, N263	Pole No. 82, N264....	55	120	0.25	13	13,200
2 x 266	38	Dundas H-T sta.....	Pole No. 260, N266....	40	120	5.44	260	13,200
237 x 70	48	Caledonia dist. sta.....	Pole No. 941, N270...	40	120	6.10	267	13,200
264 x 71	129	Pole No. 82, N264	Pole No. 328, N271...	35	132	5.78	245	13,200

NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
N.	L.T.							
301 x 64	N.C.R. 607-3	Toronto city limits....	York twp. limits.....	.....	.....	0.22	12	.....
364 x 68	N.C.R. 607-1	York twp. limits.....	Unionville jct., N368 ..	.....	.....	.....	.....	.....
368 x 67	N.C.R. 607-1	Unionville jct., N368 ..	Markham jct., N367..	.....	.....	.....	.....	.....
367 x 7	215	Markham jct., N367 ..	Markham.	40	125	5.58	235	4,000

LINES

INDAS DISTRICT—SYMBOL N2

o. f r- its	Size and material of power cable	Size and material of telephone wire	Size and ma- terial of ground cable	Make and style of power insulators	Date work began	Date placed in operation
customers						
4	4/0 B.&S.G.H.D. { copper	10 B.&S.G.c.c. steel 8 B.W.G. iron wire	1/4" galv. steel	C.P. 133	April 7, 1915	Oct. 4, 1915
2	4 B. & S.G. copper	10 B. & S.G. copper	1/4" galv. steel	C.P. 136	Feb. 25, 1915	Mar. 15, 1915
2	2 B. & S.G. alum.	8 B.&S.G. c.c. steel	1/4" galv. steel	.....	Sept. 30, 1911	April 6, 1912
1	4 B. & S.G. D.B. W.P. copper	None	None	.....	Nov. 20, 1912	Nov. 30, 1912
1	2/0 B.&S.G. copper	None	None	.....	Sept. 5, 1912	Sept. 20, 1912
1	3/0 B. & S.G. alum.	8 B. & S.G.c.c. steel	1/4" galv. steel	Thom. 2041	June 15, 1912	Sept. 20, 1912
1	6 B. & S.G. H.D. copper	9 B.W.G. galv. iron	None	C.P. 105	Sept. 10, 1919	Oct. 17, 1919

distributing stations

1	2 B.&S.G.S.R.alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 12547	July 24, 1915	Oct. 22, 1915
1	2 B. & S.G. alum.	8 B. & S.G. c.c. steel	1/4" galv. steel	Thom 2041	July 21, 1911	April 6, 1912
1	3/0 B. & S.G. alum.	8 B. & S.G. c.c. steel	1/4" galv. steel	Thom 2041	May 10, 1912	Sept. 20, 1912
1	2 B. & S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Feb. 28, 1913	Aug. 15, 1913

junctions

2	4 B. & S.G. copper	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Dec. 1, 1911	Dec. 21, 1911
2	4 B. & S.G. copper	10 B. & S.G. copper	1/4" galv. steel	C.P. 136	Feb. 25, 1915	Mar. 15, 1915
1	2 B. & S.G. alum.	8 B. & S.G. c.c. steel	1/4" galv. steel	Thom 2041	July 21, 1911	April 6, 1912
1	3/0 B. & S.G. alum.	8 B. & S.G. c.c. steel	1/4" galv. steel	Thom 2041	June 22, 1912	Sept. 20, 1912
1	2 B.&S.G.S.R.alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 12547	July 24, 1915	Oct. 22, 1915

TORONTO DISTRICT—SYMBOL N3

o. f r- its	Size and material of power cable	Size and material of telephone wire	Size and ma- terial of ground cable	Make and style of power insulators	Date work began	Date placed in operation
1	6 B. & S.G. bare copper	.....	6 B.W.G. galv. iron	.....	.....	.....
1	2 B.&S.G.S.R.alum	.....	1/4" galv. steel	C.P. 105	Dec. 27, 1919	April 1, 1920

DESCRIPTION

NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt- age
Lines terminating								
N. 432 x 3	L.T. 116	Delaware dist. sta.....	Lambeth.....			6.59	.....	4,000
432 x 4	117	Delaware dist. sta.....	Mt. Brydges.....			3.99	.....	4,000
464 x 5	98	Pole No. 944, N464....	Strathroy mun. sta....	40	120	9.27	425	13,200
467 x 6	77	Pole No. 388, N467....	Thorndale.....	35	132	2.47	179	13,200
467 x 7	93	Pole No. 388, N467....	Deller Bros.....	25	132	0.89	42	2,200
439 x 8	78	Dorchester dist. sta....	Thamesford.....	35	132	5.88	280	13,200
439 x 20	177	Dorchester dist. sta....	Dorchester.....	30	160	2.81	91	4,000
440 x 11	134	Lucan dist. sta.....	Granton.....	30	132	6.09	247	4,000
440 x 12	130	Lucan dist. sta.....	Pole No. 146, N.412..	30	132	3.57	146	4,000
474 x 14	151	Pole No. 51, N474....	Hensall.....	30	132	5.12	205	4,000
475 x 15	161	Sarepta Met. sta. 316, N475	Zurich.....	30	132	5.17	211	4,000
475 x 16	160	Sarepta Met. sta. 316, N475	Dashwood.....	30	132	1.35	56	4 000
442 x 18	211	Ailsa Craig dist. sta....	Parkhill.....	30	160	9.03	325	4,000

Lines terminating

462 x 32	119	Pole No. 760, N462....	Delaware dist. sta.....	55	120	0.09	5	13,200
469 x 39	76	Pole No. 38, N469....	Dorchester dist. sta....	35	132	6.17	219	13,200
472 x 42	210	Pole No. 757, N472....	Ailsa Craig dist. sta....	30	132	9.92	403	13,200
440 x 43	136	Lucan dist. sta.....	Exeter dist. sta.....	35	132	13.24	558	13,200
472 x 40	99	Pole No. 757, N.472...	Lucan dist. sta.....	35& 40	132	3.00	123	13,200

Lines terminating

463 x 62	96	Pole No. 462, N463 ...	Pole No. 760, N462...	40	120	6.59	298	13,200
4 x 463	95	London trans. sta.....	Pole No. 462, N463...	40	120	10.13	457	13,200
462 x 64	97	Pole No. 760, N462....	Pole No. 944, N464....	40	120	3.99	184	13,200
439 x 67	77	Dorchester dist. sta....	Pole No. 388, N467...	35	132	4.02	132	13,200
4 x 469	18	London trans. sta.....	Pole No. 38, N469....	40	120	0.81	38	13,200
469 x 70	19	Pole No. 38, N469....	Pole No. 99, N470....	45	120	1.38	61	13,200
470 x 72	99	Pole No. 99, N470....	Pole No. 757, N472...	35&40	132	16.18	659	13,200
443 x 74	151	Exeter dist. sta.....	Pole No. 51, N474....	30	132	1.07	.....	4,000
474 x 75	159	Pole No. 51, N474....	Pole No. 316, N475...	30	132	7.58	265	4,000

NOTE:—N4 x 469 L.T. 18—Arms, pins, poles and hardware owned by H.E.P.C., 1 circuit of 3/0 N469 x 70 L.T. 19—1 circuit of 2 B. & S.G. alum, with insulators owned by London Local N469 x 1 L.T. 20—Jct. pole No. 38 L.T. 18 to Jct. pole No. 93 L.T. 20, 1-circuit of 3/0 N 4 x 401 L.T. 21—2-circuits of 3/0 B.&S.G. Alum, together with insulators, cross arms, N 469 x 1 L.T. 22—1-circuit of 3/0 B.&S.G. Alum, together with insulators, cross arms, N 470 x 17—1-circuit of 2 B.&S.G. Alum, together with insulators, cross arms, poles, etc.,

LINES

LONDON DISTRICT—SYMBOL N4

Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
6 B. & S.G. M.H.D. copper	None	None	C.P. 105	Jan. 25, 1915	Mar. 15, 1915
6 B. & S.G. M.H.D. copper	None	1/4" galv. steel	O.B. 9403	Jan. 7, 1915	Mar. 1, 1915
3/0 B. & S.G. alum.	10 B. & S.G.c.c. steel	1/4" galv. steel	C.P. 136	Sept. 14, 1914	Nov. 30, 1914
2 B. & S.G. alum.	None	1/4" galv. steel	Thom 2041	Oct. 10, 1913	Feb. 6, 1914
6 B. & S.G. copper	None	8 B. & S.G. c.c. steel as neutral	Parker 2822	Mar. 19, 1914	Mar. 19, 1915
2 B. & S.G. alum.	None	1/4" galv. steel	Thom 2041	Oct. 13, 1913	Jan. 27, 1914
4 B. & S.G. copper	None	1/4" galv. steel	.....	.....	.....
6 B. & S.G. M.H.D. copper	None	6 B.W.G. galv. iron	C.P. 259	April 6, 1916	June 29, 1916
2 B. & S.G.S.R.alum	None	1/4" galv. steel	O.B. 12546	July 28, 1915	Dec. 15, 1915
6 B. & S.G. M.H.D. copper	None	6 B.W.G. galv. iron	O.B. 9403	Sept. 11, 1916	Dec. 21, 1916
2 B. & S.G.S.R.alum	None	1/4" galv. steel	C.P. 259	Mar. 29, 1917	Aug. 23, 1917
6 B. & S.G. M.H.D. copper	None	1/4" galv. steel	C.P. 259	Mar. 29, 1917	Aug. 23, 1917
2 B. & S.G.S.R.alum	None	9/32" galv. steel	C.P. 105	Nov. 17, 1919	May 14, 1920

distributing stations

2 B. & S.G. copper	10 B. & S.G.c.c. steel	1/4" galv. steel	O.B. 9413	Jan. 27, 1915	Feb. 1, 1915
2 B. & S.G. alum	10 B.W.G.galv.iron	1/4" galv. steel	Thom 2041	Sept. 18, 1913	Jan. 27, 1914
2 B. & S.G.S.R.alum	6 B. & S.G.S.R.alum	9/32" galv. steel	C.P. 793	Nov. 12, 1919	May 2, 1920
3/0 B. & S.G. alum	9 B.W.G. galv.iron	1/4" galv. steel	O.B. 12546	Nov. 26, 1915	May 4, 1916
2 B. & S.G.S.R.alum	10 B.W.G. galv.iron	1/4" galv. steel	C.P. 136	Oct. 23, 1914	Jan. 21, 1915

junctions

3/0 B. & S.G. alum.	10 B. & S.G.c.c. steel	1/4" galv. steel	C.P. 136	Oct. 15, 1914	Nov. 30, 1914
3/0 B. & S.G. alum.	10 B. & S.G.c.c. steel	1/4" galv. steel	C.P. 136	Sept. 1, 1914	Nov. 30, 1914
3/0 B. & S.G. alum.	10 B. & S.G.c.c. steel	1/4" galv. steel	C.P. 136	Sept. 29, 1914	Nov. 30, 1914
2 B. & S.G. alum.	None	1/4" galv. steel	Thom 2041	Oct. 10, 1913	Feb. 6, 1914
2 C.2S.R. alum.					
1-C.2 alum.	10 B. & S.G.c.c. steel	1/4" galv. steel	Thom 2041	Oct. 26, 1910	Jan. 10, 1911
2 B. & S.G.S.R.alum	10 B. & S.G.c.c. steel	1/4" galv. steel	Thom 2041	Oct. 26, 1910	Jan. 19, 1911
2 B. & S.G.S.R.alum	10 B.W.G.galv.iron	1/4" galv. steel	C.P. 136	Oct. 23, 1914	Jan. 21, 1915
2 B. & S.G.S.R.alum					
2 B. & S.G. M.H.D. copper	None	6 B.W.G. galv. iron	O.B. 9403	Sept. 11, 1916	Dec. 21, 1916
2 B. & S.G.S.R.alum	None	1/4" galv. steel	C.P. 259	Mar. 21, 1917	Aug. 25, 1917

& S. G. alum, with insulators from pole No. 5 to Jct. pole No. 38, owned by London local Hydro.
 dro.
 & S.G. Alum, together with insulators, cross arms and poles owned by London Local Hydro.
 es, etc., owned by London Local Hydro.
 es, etc., owned by London Local Hydro.
 ed by London Local Hydro.

DESCRIPTION

NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age
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Lines terminating

N.	L.T.							
5 x 501	32	Guelph struct. on sta...	Property.....	40	120	0.08	5	13,200
562 x 2	31	Pole No. 70, N562.....	Ont. Agric. College...	40	120	0.10	8	13,200
565 x 5	57A	Pole No. 155, N565....	Prison Farm.....	40	120	0.08	3	13,200

Lines terminating

564 x 33	86	Pole No. 776, N564....	Elora dist. sta.....	40	120	1.18	57	13,200
564 x 34	87	Pole No. 776, N564....	Fergus dist. sta.....	35	120	1.96	92	13,200
566 x 36	66	Pole No. 453, N566....	Rockwood dist. sta....	35	120	1.64	77	13,200
567 x 37	59	Pole No. 717, N567....	Acton dist. sta.....	40	120	0.07	5	13,200
568 x 38	94	Pole No. 1005, N568....	Cheltenham dist. sta..	35	132	5.06	218	13,200
568 x 39	65	Pole No. 1005, N568...	Georgetown dist. sta..	40	120	2.68	121	13,200

Lines terminating

5 x 562	31	Guelph trans. sta.....	Pole No. 70, N562....	40	120	1.46	70	13,200
562 x 63	57	Pole No. 70, N562.....	Pole No. 118, N563...	40	120	1.07	48	13,200
563 x 64	85	Pole No. 118, N563....	Pole No. 776, N564....	40	120	14.64	658	13,200
563 x 65	57	Pole No. 118, N563....	Pole No. 155, N565....	40	120	0.86	37	13,200
565 x 66	58	Pole No. 155, N565....	Pole No. 453, N566....	40	120	6.41	298	13,200
566 x 67	59	Pole No. 453, N566....	Pole No. 717, N567....	40	120	5.78	264	13,200
567 x 68	65	Pole No. 717, N567....	Pole No. 1005, N568..	40	120	6.37	288	13,200

NIAGARA SYSTEM—

Lines terminating

N.	L.T.							
6 x 601	17 & 35	Preston trans. sta.....	Preston corp. sta.....	35	120	0.14	11	13,200
601 x 2	35	Preston corp. sta.....	G.P. & H. Rly.....	40	120	0.12	6	13,200
664 x 3	16	Pole No. 99, N664....	Galt mun. sta.....	40	120	3.75	175	13,200
664 x 4	15	Pole No. 99, N664....	Hespeler mun. sta....	40	120	2.09	99	13,200
6-D1-5	.....	Preston trans. sta.....	Freeport Sanitarium..	30	132	3.23	136	4,000
6-D1-1	72, 72A, & 72B	Preston trans. sta.....	Breslau.....	40	120	6.35	292	6,600

Lines terminating

6 x 664	14	Preston trans. sta.....	Pole No. 99, N664....	45	120	2.04	99	13,200
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NOTE.—N664 x 3, L.T. 16, 63 poles from No. 212 to No. 274 inclusive were supplied and erected by N6-01-5, — 2 poles, No. 11 and No. 12, supplied by Preston local Hydro.

OF LINES

GUELPH DISTRICT—SYMBOL N5

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at customers						
3	1/0 B. & S.G. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	.....	Aug. 7, 1911	Sept. 4, 1911
1	1/0 B. & S.G. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	C.P. 793	July 21, 1911	Nov. 9, 1911
1	2 B.&S.G.S.R. alum.	8 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	May 14, 1913	Sept. 4, 1913

at distributing stations

1	3/0 B. & S.G. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	C.P. 136	Aug. 18, 1914	Oct. 22, 1914
1	3/0 B. & S.G. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	C.P. 136	Aug. 1, 1914	Oct. 22, 1914
1	2 B.&S.G.S.R. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	May 6, 1913	Aug. 1, 1913
1	3/0 B.&S.G.S.R.al'm	8 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	Aug. 19, 1912	Dec. 14, 1912
1	1/0 B.&S.G. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	.....	June 10, 1914	July 3, 1914
1	3/0 B.&S.G. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	Mar. 11, 1913	Aug. 1, 1913

at junctions

2	1-1/0 B.&S.G. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	C.P. 793	July 21, 1911	Nov. 9, 1911
2	1-3/0 B.&S.G. alum.					
2	1-3/0 B.&S.G. alum.					
	1-3/0 B.&S.G.S.R. alum.....	8 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	Aug. 19, 1912	Dec. 14, 1912
1	3/0 B.&S.G. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	C.P. 136	June 3, 1914	Oct. 22, 1914
1	3/0 B.&S.G.S.R.al'm	8 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	Aug. 19, 1912	Dec. 14, 1912
1	3/0 B.&S.G.S.R.al'm	8 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	Aug. 19, 1912	Dec. 14, 1912
1	3/0 B.&S.G.S.R.al'm	8 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	Aug. 19, 1912	Dec. 14, 1912
1	3/0 B.&S.G. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	Mar. 11, 1913	Aug. 1, 1913

PRESTON DISTRICT—SYMBOL N6

at customers

2	1/0 B.&S.G. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	Built by Preston Corp.	
	2 B.&S.G. copper					
	1/0 B.&S.G. alum.					
2	1/0 B.&S.G.S.R.al'm	10 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	Mar. 13, 1911	Mar. 21, 1911
2	4/0 B.&S.G. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	Oct. 8, 1910	Jan. 19, 1911
1	2 B.&S.G. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	Oct. 8, 1910	Dec. 30, 1910
1	6 B.&S.G.S.R. alum.	None	3x13 galv. steel	C.P. 505	June 1, 1921	July 23, 1921
1	2 B.&S.G. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	.....	April 4, 1913	Dec. 23, 1913

at junctions

3	1-2 B.&S.G. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	Oct. 8, 1910	Jan. 19, 1911
	2-4/0 B.&S.G. alum.					

Galt local Hydro.

DESCRIPTION

NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age
Lines terminating								
762 x 1	L.T. 6	Pole No. 10, N762.....	Kitchener mun. sta. ...	45	120	0.76	34	13,200
762 x 2	5	Pole No. 9, N762.....	Waterloo mun. sta.....	40	120	1.64	79	13,200
735 x 6	44	Baden dist. sta.....	Wellesley.....	30	150	7.92	252	4,000
738 x 8	52 52A & 52B	Metering sta.....	Petersburg and St. Agatha				76	4,000

Lines terminating								
702 x 33	71	Waterloo mun. sta.....	St. Jacobs dist. sta....	40	120	6.28	299	13,200
733 x 34	71	St. Jacobs dist. sta.....	Elmira dist. sta.....	40	120	4.62	218	13,200
765 x 35	7A	Pole No. 405, N765....	Baden dist. sta.....	40	120	0.11	7	13,200
766 x 37	7	Pole No. 463, N766....	New Hamburg dist. sta	40	120	1.89	92	13,200

Lines terminating								
7 x 762	4	Kitchener trans. sta....	Pole No. 9, N762.....	40	120	0.18	10	13,200
7 x 765	7	Kitchener trans. sta....	Pole No. 405, N765....	40	120	9.09	405	13,200
765 x 66	7	Pole No. 405, N765....	Pole No. 463, N766....	40	120	1.29	58	13,200

NOTE.—N762 x 1, L.T. 6, 35 poles, from No. 10 to No. 44 inclusive, were supplied and erected
 N7 x 762, L.T. 4, 5 poles, from No. 5 to No. 9 inclusive, were supplied and erected by
 N762 x 2, L.T. 5, 9 poles, from No. 80 to No. 88 inclusive, were supplied and erected

NIAGARA SYSTEM—

Lines terminating								
863 x 3	L.T. 30	Pole No. 647, N863....	Mitchell mun. sta.....	40	120	1.27	59	26,400
834 x 4	158	Dublin dist. sta.....	Dublin.....	30	150	1.26	47	4,000
865 x 5	29	Pole No. 1153, N865....	Seaforth mun. sta.....	40	120	1.50	74	26,400
866 x 6	28	Pole No. 1550, N866....	Clinton mun. sta.....	40	120	1.27	62	26,400
873 x 12	180	Pole No. 263, N873....	Moorefield.....	30	150	1.36	52	4,000
866 x 7	150	Pole No. 1550, N866....	Goderich mun. sta.....	40	120	13.61	610	26,400
873 x 13	178	Pole No. 263, N873....	Drayton.....	30	150	3.54	123	4,000

Lines terminating								
8 x 832	125	Stratford trans. sta....	Tavistock dist. sta....	35	132	9.72	398	26,400
863 x 34	148	Pole No. 647, N863....	Dublin dist. sta.....	40	120	5.08	224	26,400
868 x 38	139	Pole No. 802, N868....	Milverton dist. sta....	35	132	0.96	38	26,400
869 x 39	141	Pole No. 1314, N869....	Listowel dist. sta....	35	132	2.77	120	26,400
871 x 40	142	Pole No. 1726, N871....	Palmerston dist. sta...	35	132	0.42	18	26,400
871 x 41	143	Pole No. 1726, N871....	Harriston dist. sta....	35	132	6.12	260	26,400

Lines terminating								
867 x 63	147	Pole No. 311, N867....	Pole No. 647, N863....	40	120	7.61	336	26,400
834 x 65	148	Dublin dist. sta.....	Pole No. 1153, N865....	40	120	6.28	282	26,400
865 x 66	149	Pole No. 1153, N865....	Pole No. 1550, N866....	40	120	8.84	397	26,400
8 x 867	146	Stratford trans. sta....	Pole No. 311, N867....	40	120	6.81	311	26,400
867 x 68	138	Pole No. 311, N867....	Pole No. 802, N868....	35	132	11.92	491	26,400
868 x 69	140	Pole No. 802, N868....	Pole No. 1314, N869....	35	132	12.83	512	26,400
869 x 70	142	Pole No. 1314, N869....	Pole No. 1657, N870....	35	132	8.40	343	26,400
872 x 71	142	Pole No. 1687, N872....	Pole No. 1726, N871....	35	132	0.84	39	26,400
870 x 72	142	Pole No. 1657, N870....	Pole No. 1687, N872....	35	132	0.78	30	26,400
840 x 73	178	Palmerston dist. sta....	Pole No. 263, N873....	30	150	7.09	237	4,000

OF LINES

KITCHENER DISTRICT—SYMBOL N7

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at customers						
2	1/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	O.B. 12546 Thom 2041 O.B. 12546 Thom 2041 O.B. 9403	Aug. 25, 1910	Sept. 11, 1910
2	1/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel		Sept. 11, 1910	Nov. 25, 1910
1	4 B.&S.G. copper	None	6 B.W.G.galv.iron		May 16, 1916	Oct. 23, 1916
.....	.....	None	None		.....	.....

at distributing stations

1	2 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	May 17, 1913	Oct. 25, 1913
1	2 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	May 17, 1913	Oct. 25, 1913
2	2 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	.....	May, 1912
2	2 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Sept. 11, 1910	Feb. 3, 1911

at junctions

4	1/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	O.B. 12546 Thom 2041 Thom 2041 Thom 2041	Aug. 25, 1910	Sept. 11, 1910
2	2 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel		Sept. 11, 1910	Feb. 3, 1911
2	2 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel		Sept. 11, 1910	Feb. 3, 1911

by Kitchener local Hydro.
 Kitchener local Hydro.
 by Waterloo local Hydro.

STRATFORD DISTRICT—SYMBOL N8

at customers

2	2 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Mar. 24, 1911	Aug. 3, 1911
1	6 B.&S.G. M.H.D. copper	None	6 B.W.G.galv.iron	C.P. 259	June 8, 1917	Sept. 25, 1917
2	2 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Mar. 25, 1911	Sept. 13, 1911
2	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	April 6, 1911	Aug. 4, 1911
1	6 B.&S.G. copper	None	6 B.W.G.galv.iron	C.P. 505	Dec. 1, 1917	Feb. 22, 1918
2	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 133	April 23, 1913	Dec. 23, 1914
1	4 B.&S.G. copper	None	6 B.W.G.galv.iron	C.P. 505	Oct. 24, 1917	Feb. 22, 1918

at distributing stations

1	6 B.W.G. galv. iron	9 B.W.G. galv. iron	6 B.W.G.galv.iron	C.P. 133	Sept. 9, 1915	Oct. 26, 1916
2	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 133	April 23, 1913	Dec. 23, 1914
1	2 B.&S.G.S.R. alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	Oct. 15, 1915	May 18, 1916
1	2 B.&S.G.S.R. alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	Oct. 28, 1915	May 27, 1916
1	1/0 B.&S.G.S.R.al'm	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	Oct. 14, 1915	June 6, 1916
1	1/0 B.&S.G.S.R.al'm	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	Dec. 10, 1915	June 30, 1916

at junctions

2	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 133	April 23, 1913	Dec. 23, 1914
2	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 133	April 23, 1913	Dec. 23, 1914
2	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 133	April 23, 1913	Dec. 23, 1914
2	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 133	April 23, 1913	Dec. 23, 1914
1	1/0 B.&S.G.S.R.al'm	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	Sept. 20, 1915	May 18, 1916
1	1/0 B.&S.G.S.R.al'm	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	Oct. 13, 1915	May 27, 1916
1	1/0 B.&S.G.S.R.al'm	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	Oct. 14, 1915	June 6, 1916
1	1/0 B.&S.G.S.R.al'm	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	Oct. 14, 1915	June 6, 1916
1	1/0 B.&S.G.S.R.al'm	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	Oct. 14, 1915	June 6, 1916
1	4 B.&S.G. copper	None	6 B.W.G.galv.iron	C.P. 505	Oct. 24, 1917	Feb. 22, 1918

DESCRIPTION

NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age
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Lines terminating

N. 961 x 32	L.T. 46	Pole No. 33, N961....	St. Marys Portland Cement Co. dist.sta.	40	120	1.55	49	13,200
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Lines terminating

9 x 961	46	St. Marys trans. sta....	Pole No. 33, N961....	40	120	0.67	33	13,200
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NOTE.—N9 x 961, L.T. 46, 29 poles, from pole No. 4 to pole No. 32 inclusive, owned by St. Marys

NIAGARA SYSTEM—

Lines terminating

N. 1062 x 2	L.T. 109	Pole No. 76, N1062....	W.T.V. & I. Rly.....	0.02	2	13,200
1073 x 5	8	Pole No. 324, N1073...	Ingersoll mun. sta....	40	120	2.80	131	13,200
1036 x 7	11B	Norwich dist. sta.....	Burgessville.....	30	160	3.25	115	2,300
1036 x 8	11A	Norwich dist. sta.....	Otterville.....	30	160	4.50	158	2,300
1066 x 9	10	Pole No. 508, N1066...	Tillsonburg mun. sta..	40	120	10.30	467	13,200
1009 x 70	200-	Tillsonburg.....	Springfield.....	30	160	12.54	418	4,000
1070 x 10	205							
1034 x 13	42							
		Beachville dist. sta....	Beachville White Lime Co.	.....	.....	1.00	.....	2,200

Lines terminating

1064 x 33	106	Pole No. 289, N1064...	Embro dist. sta.....	35	132	6.04	256	13,200
1064 x 34	45	Pole No. 289, N1064...	Beachville dist. sta....	30	50	0.01	1	13,200
1066 x 36	11	Pole No. 508, N1066...	Norwich dist. sta.....	40	120	4.59	208	13,200

Lines terminating

10 x 1062	8	Woodstock trans. sta....	Pole No. 76, N1062...	40	120	1.57	76	13,200
1062 x 64	8	Pole No. 76, N1062....	Pole No. 289, N1064..	40	120	4.70	213	13,200
10 x 1066	9	Woodstock trans. sta....	Pole No. 508, N1066..	40	120	11.08	508	13,200
1064 x 73	8	Pole No. 289, N1064...	Pole No. 324, N1073..	40	120	.83	35	13,200

NIAGARA SYSTEM—

Lines terminating

N. 11 x 1101	L.T. 12	St. Thomas trans. sta..	St. Thomas mun. sta..	40	120	1.13	47	13,200
1135 x 6	154	West Lorne dist. sta....	Rodney.....	30	132	4.00	161	4,000

OF LINES

ST. MARYS DISTRICT—SYMBOL N9

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
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at distributing stations

1	3/0 B.&S.G. alum.	8 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	June 15, 1912	Sept. 7, 1912
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at junctions

1	3/0 B.&S.G. alum.	8 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	June 15, 1912	Sept. 7, 1912
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local Hydro.

WOODSTOCK DISTRICT—SYMBOL N10

at customers

1	2 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 136	Sept. 12, 1914	Sept. 13, 1914
2	1/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Nov. 14, 1910	Mar. 28, 1911
1	6 B.&S.G. copper	None	1/4" galv. steel	.....	.....	Dec. 7, 1916
1	6 B.&S.G. copper	None	1/4" galv. steel	.....	.....	1916
2	1/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Jan. 2, 1911	April 29, 1911
1	6 B.&S.G. copper	None	1/4" galv. steel	.....	Nov. 23, 1916	July 1, 1917
1	2 B.&S.G. alum.	None	None	.....	.....	.....

at distributing stations

1	1/4" galv. steel	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 136	Oct. 1, 1914	Dec. 22, 1914
1	1/0 B.&S.G. alum.	.....	1/4" galv. steel	Thom 2041	June 1, 1912	Oct. 21, 1917
1	2 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Feb. 13, 1911	Mar. 30, 1911

at junctions

2	1/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Nov. 14, 1910	Mar. 28, 1911
2	1/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Nov. 14, 1910	Mar. 28, 1911
2	1/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Jan. 2, 1911	April 29, 1911
2	1/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Nov. 14, 1910	Mar. 28, 1911

ST. THOMAS DISTRICT—SYMBOL N11

at customers

2	1/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Dec. 14, 1910	Dec. 30, 1910
1	6 B.&S.G. M.H.D. copper	None	6 B.W.G.galv.iron	C.P. 259	Jan. 2, 1917	Jan. 15, 1917

DESCRIPTION
NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
Lines terminating								
1134 x 35	153	Dutton dist. sta.....	West Lorne dist. sta..	30	132	7.60	312	13,200
1168 x 37	41	Pole No. 112, N1168...	Port Stanley dist. sta.	35	120	10.03	462	13,200
1168 x 38	174	Pole No. 112, N1168...	Aylmer dist. sta.....	35	132	9.60	405	13,200
1162 x 34	121	Pole No. 4, N1162.....	Dutton dist. sta.....	30	132	18.33	756	13,200

Lines terminating								
11 x 1162	121	St. Thomas trans. sta..	Pole No. 5, N1162....	30	132	0.04	4	13,200
11 x 1168	41	St. Thomas trans. sta..	Pole No. 112, N1168..	35	120	2.24	112	13,200

NOTE.—N11 x 1101, L.T. 12, 23 poles, No. 25 to No. 47 inclusive, were supplied and erected by

NIAGARA SYSTEM—

Lines terminating								
N.	L.T.							
1262 x 1	69	Pole No. 246, N1262..	Brantford mun. sta. ...	40	120	1.47	72	26,400
1262 x 2	69A	Pole No. 246, N1262..	L.E. & N. Ry.....	45	125	0.24	13	26,400
12 x 1203	128	Brant trans. sta.....	St. George.....	30	132	9.19	199	4,000
1267 x 6	114	Pole No. 1230, N1267	Simcoe mun. sta.....	35	132	0.06	5	26,400
1267 x 7	114A	Pole No. 1230, N1267	L.E. & N. Ry, Simcoe	45	120	0.25	11	26,400
1268 x 8	68	Pole No. 40, N1268...	Paris mun. sta.....	40	120	2.44	110	26,400
1274 x 12	92	Pole No. 714, N1274..	Plattsville.....	35	132	6.84	269	4,000
1241 x 13	91	Drumbo dist. sta.....	Princeton.....	35	132	5.65	234	4,000
1274 x 14	184	Pole No. 714, N1274..	Wolverton Mills.....	35	132	1.81	1	4,000
1206 x 15	.....	Simcoe dist. sta.....	Port Dover.....	35	160	7.00	207	4,000
12 x 1216	.....	Brant trans. sta.....	Brantford Sand & Gravel Co.....	30	....	2.27	3	4,000
Lines terminating								
1264 x 34	112	Pole No. 253, N1264..	Burford dist. sta.....	35	132	3.48	142	26,400
1265 x 35	113A	Pole No. 869, N1265..	Waterford dist. sta....	40	132	0.09	4	26,400
1270 x 40	89	Pole No. 448, N1270..	Ayr dist. sta.....	35	120	1.20	56	26,400
1272 x 41	90	Pole No. 713, N1272..	Drumbo dist. sta.....	35	132	0.50	21	26,400

Lines terminating								
12 x 1261	69	Brant trans. sta.....	Pole No. 19, N1261...	40	120	0.33	17	26,400
1261 x 76	69	Pole No. 19, N1261...	Pole No. 108, N1276..	40	120	1.92	89	26,400
1268 x 64	111	Pole No. 40, N1268...	Pole No. 253, N1264..	35	132	5.86	228	26,400
1264 x 65	113	Pole No. 253, N1264..	Pole No. 869, N1265..	35	132	15.06	616	26,400
1275 x 67	114	Pole No. 1145, N1275.	Pole No. 1230, N1267.	35	132	2.02	85	26,400
1265 x 75	114	Pole No. 869, N1265..	Pole No. 1145, N1275.	35	132	6.79	276	26,400
1261 x 68	68	Pole No. 19, N1261...	Pole No. 40, N1268...	40	120	0.44	21	26,400
1208 x 69	88	Paris mun. sta.....	Pole No. 196, N1269..	35	132	1.09	49	26,400
1269 x 70	88	Pole No. 196, N1269..	Pole No. 448, N1270..	35	132	6.14	252	26,400
1270 x 71	90	Pole No. 448, N1270..	Pole No. 636, N1271..	35	132	4.53	188	26,400
1271 x 72	90	Pole No. 636, N1271..	Pole No. 713, N1272..	35	132	1.80	77	26,400
1241 x 74	92	Drumbo dist. sta.....	Pole No. 714, N1274..	35	132	0.49	21	4,000
1276 x 62	69	Pole No. 108, N1276..	Pole No. 246, N1262..	40	120	2.94	188	26,400

NOTE.—N12 x 1216—This line is carried on 3 new poles, erected on Brant sta. property.

The line is then carried on L.T. 111 poles from No. 3 to No. 17, then on is owned by the Gravel Co.

N1206 x 15—This line is carried on L.T. 114 poles from Simcoe mun. sta. to Jct. pole

*Independent poles.

OF LINES

ST. THOMAS DISTRICT—SYMBOL N11—continued

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at distributing stations						
1	1/0 B.&S.G.S.R.al'm	None	None	C.P. 136	Dec. 4, 1916	Dec. 22, 1916
1	2 B.&S.G. alum.	8 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Oct. 16, 1911	Mar. 9, 1912
1	1/4" galv. steel	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 889	Aug. 27, 1917	Feb. 11, 1918
1	1/0 B.&S.G. alum.	None	None	C.P. 136	May 3, 1915	Aug. 27, 1915

at junctions

1	1/0 B.&S.G. alum.	None	None	C.P. 136	May 3, 1915	Aug. 27, 1915
1	2 B.&S.G. alum.	8 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Oct. 16, 1911	Mar. 9, 1912

St. Thomas local Hydro.

BRANT DISTRICT—SYMBOL N12

at customers

2	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 102	Dec. 15, 1913	Jan. 17, 1914
2	2 B.&S.G.S.R. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	O.B. 11622	Sept. 9, 1921	Sept. 21, 1921
1	2 B.&S.G.S.R. alum.	None	1/4" galv. steel	O.B. 9403	July 1, 1915	Aug. 17, 1915
1	2 B.&S.G.S.R. alum.	10 B.&S.G.h.d. cop.	1/4" galv. steel	C.P. 102	Nov. 26, 1914	May 9, 1915
1	2 B.&S.G.S.R. alum.	10 B.W.G.galv.iron	1/4" galv. steel	C.P. 133	.....	July 14, 1916
2	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 102	Nov. 11, 1913	Jan. 3, 1914
1	4 B.&S.G. copper	None	1/4" galv. steel	Parker2822	Aug. 17, 1914	Dec. 1, 1914
1	6 B.&S.G. copper	None	1/4" galv. steel	Parker2822	Aug. 17, 1914	Dec. 18, 1914
1	6 B.&S.G. M.H.D. copper	None	None	C.P. 105	Sept. 18, 1918	Oct. 22, 1918
1	2 B.&S.G.S.R. alum.	None	3x13 galv. steel	C.P. 105	July 6, 1921	Nov. 8, 1921
1	6 B.&S.G. copper	.....	.....	Thom 2041	Nov. 17, 1921	Jan. 15, 1922

at distributing stations

1	2 B.&S.G.S.R. alum.	10 B.&S.G.h.d. cop.	1/4" galv. steel	C.P. 102	Nov. 21, 1914	May 6, 1915
1	2 B.&S.G.S.R. alum.	10 B.&S.G.h.d. cop.	1/4" galv. steel	C.P. 102	Nov. 21, 1914	May 10, 1915
1	1/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 102	Sept. 15, 1914	Dec. 1, 1914
1	1/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 102	July 13, 1914	Dec. 1, 1914

at junctions

4	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 102	Dec. 15, 1913	Jan. 17, 1914
2	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 102	Dec. 15, 1913	Jan. 17, 1914
1	2 B.&S.G.S.R. alum.	10 B.&S.G. copper	1/4" galv. steel	C.P. 102	Nov. 6, 1914	May 6, 1915
1	2 B.&S.G.S.R. alum.	10 B.&S.G.h.d. cop.	1/4" galv. steel	C.P. 102	Nov. 21, 1914	May 10, 1915
1	2 B.&S.G.S.R. alum.	10 B.&S.G.h.d. cop.	1/4" galv. steel	C.P. 102	Nov. 26, 1914	May 9, 1915
1	2 B.&S.G.S.R. alum.	10 B.&S.G.h.d. cop.	1/4" galv. steel	C.P. 102	Nov. 26, 1914	May 9, 1915
3	1-cir. 2 B.&S.G.S.R. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 102	Nov. 11, 1913	Jan. 3, 1914
	2-cirs., 3/0 B.&S.G. alum.					
1	1/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 102	July 21, 1914	Dec. 1, 1914
1	1/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 102	July 21, 1914	Dec. 1, 1914
1	1/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 102	July 13, 1914	Dec. 1, 1914
1	1/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 102	July 13, 1914	Dec. 1, 1914
1	4 B.&S.G. copper	None	1/4" galv. steel	Parker2822	Aug. 17, 1914	Dec. 1, 1914
2	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 102	Dec. 15, 1913	Jan. 17, 1914

L.T. 69 poles from No. 20 to No. 108. From pole No. 108 to the Brantford Sand and Gravel Co., the line No. 1145—90 poles.

DESCRIPTION

NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt- age
Lines terminating								
N.	L.T.							
1331 x 2	26&26A	Port Credit dist. sta...	Port Credit Brick Wks	45	120	0.88	43	2,200
1363 x 3	163	Pole No. 30.....	Shale Brick Co.....	55	120	1.22	59	13,200
1368 x 4	27	Pole No. 230.....	Brampton mun. sta...	40	120	6.17	276	13,200
1367 x 5	79A	Pole No. 27.....	Milton Br., Streetsville	35	120	0.77	36	4,000
1370 x 7	181	Pole No. 52.....	Tor. Milling Co.....	25	120	0.72	33	4,000
1369 x 8	62	Pole No. 381.....	Milton mun. sta.....	40	120	13.36	592	13,200
1370 x 11	214	Pole No. 52.....	W. D. Reid & Sons...	30	132	0.22	9	4,000
1305 x 6	79A	Milton Brick Co., Streetsville	Streetsville Brick Co..	.....	.....	.....	.....	.....
Lines terminating								
1362 x 31	26	Pole No. 84, N1362...	Port Credit dist. sta...	40	120	0.32	16	13,200
1369 x 39	79	Pole No. 381, N1369...	Streetsville dist. sta...	45	120	0.41	19	13,200
Lines terminating								
13 x 1361	26	Cooksville trans. sta.	Pole No. 6, N1361....	40	120	0.08	6	13,200
1361 x 62	26	Pole No. 6, N1361....	Pole No. 84, N1362...	40	120	1.79	78	13,200
13 x 1363	27	Cooksville trans. sta.	Pole No. 30, N1363...	40	120	0.57	30	13,200
1363 x 64	27	Pole No. 30, N1363...	Pole No. 89, N1364...	40	120	1.32	59	13,200
1339 x 67	79A	Streetsville dist. sta...	Pole No. 27, N1367...	35	120	0.53	22	4,000
1364 x 68	27	Pole No. 89, N1364...	Pole No. 230, N1368...	40	120	3.18	141	13,200
1368 x 69	62	Pole No. 230, N1368...	Pole No. 381, N1369...	40	120	3.36	151	13,200
1362x1661	36	Pole No. 84, N1362...	Pole No. 332, N1661..	45	120	5.48	250	13,200
1367x70	181	Pole No. 27, N1367...	Pole No. 52, N1670...	25	120	0.51	25	4,000

OF LINES

COOKSVILLE DISTRICT—SYMBOL N13

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at customers						
2	2 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	April 5, 1911	July 23, 1911
1	2 B.&S.G.S.R. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Mar. 6, 1917	April 22, 1917
2	2/0 B.&S.G.S.R.al'm	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Feb. 15, 1911	May 6, 1911
1	6 B.&S.G. copper	None	6 B.W.G.galv.iron	.....	.....	.....
1	6 B.&S.G. copper	None	6 B.W.G.galv.iron	C.P. 105	Feb. 2, 1918	Mar. 9, 1918
1	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Nov. 25, 1912	Mar. 13, 1913
1	6 B.&S.G. copper	None	1/4" galv. steel	C.P. 105	Dec. 22, 1919	Jan. 4, 1920
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at distributing stations

2	2 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Feb. 24, 1911	July 10, 1911
1	2 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Nov. 1, 1913	Nov. 24, 1913

at junctions

3	1-cir. 4 B.&S.G. copper	10 B.&S.G.c.c. steel	1/4" galv. steel	{ O.B. 12546 Thom 2041	Feb. 24, 1911	July 10, 1911
	2-cirs. 2 B.&S.G. alum.					
2	2 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	{ O.B. 12546 Thom 2041	Feb. 24, 1911	July 10, 1911
3	2-cir. 3/0 B.&S.G. S.R. alum.					
	1-cir. 2 B.&S.G. S.R. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	{ O.B. 12546 Thom 2041	Feb. 15, 1911	May 6, 1911
2	3/0 B.&S.G.S.R.al'm	10 B.&S.G.c.c. steel	1/4" galv. steel	{ O.B. 12546 Thom 2041	Feb. 15, 1911	May 6, 1911
1	6 B.&S.G. copper	None	6 B.W.G.galv.iron	.....	.....	.....
2	3/0 B.&S.G.S.R.al'm	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Feb. 15, 1911	May 6, 1911
1	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Nov. 25, 1912	Mar. 13, 1913
2	{ 1-2 B.&S.G.S.R.al'm 1-2 B.&S.G. alum.	8 B.&S.G.c.c. steel	1/4" galv. steel	{ O.B. 12546 Thom 2041	April 26, 1911	Feb. 29, 1912
1	6 B.&S.G. copper					
		None	6 B.W.G.galv.iron	C.P. 105	Feb. 2, 1918	Mar. 9, 1913

DESCRIPTION

NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
Lines terminating								
N.	L.T.							
1462 x 1	84	Pole No. 41, N1462....	Chatham mun. sta....	40	120	1.11	59	26,400
1432 x 3	115	Tilbury dist. sta.....	Comber.....	30	132	7.26	306	4,000
1435 x 6	122	Ridgetown dist. sta....	Highgate.....	30	120	6.18	10	4,000
1443 x 14	137	Petrolia dist. sta.....	Wyoming.....	25	132	7.92	26	4,000
1477 x 17	135	Pole No. 2304, N1477..	Sarnia mun. sta.....	35	125	7.73	333	26,400
1438 x 19	212	Bothwell dist. sta.....	Newbury.....	30	160	5.93	210	4,000
1419 x 20	213	Newbury.....	Glencoe.....	30	160	5.89	199	4,000
1419 x 21		Newbury.....	Wardsville.....	30	160	2.07	72	2,300
1477 x 48		Pole No. 2304, N1477..	Petrolia Water Works	35	125	3.56	151	26,400
1483 x 23		Pole No. 847, N1483..	Dom. Sugar Co., Wallaceburg	40	125	.81	35	26,400
1445 x 24		Forest dist. sta.....	Thedford.....	30	160	11.50	391	4,000
1446 x 22		Watford dist. sta.....	Alvinston.....	30	160	10.60	334	4,000

Lines terminating

1462 x 32	101	Pole No. 41, N1462....	Tilbury dist. sta.....	35	132	16.98	84	26,400
1468 x 34	126	Pole No. 69, N1468....	Blenheim dist. sta....	35	132	9.52	388	26,400
1466 x 35	127	Pole No. 783, N1466....	Ridgetown dist. sta...	35	132	0.43	20	26,400
1467 x 37	123	Pole No. 676, N1467....	Thamesville dist. sta..	35	132	0.09	6	26,400
1467 x 38	124	Pole No. 676, N1467....	Bothwell dist. sta.....	35	132	9.83	407	26,400
1469 x 39	104	Pole No. 520, N1469....	Wallaceburg dist. sta..	40	120	8.50	385	26,400
1470 x 40	105	Pole No. 795, N1470....	Dresden dist. sta.....	40	132	0.68	33	26,400
1471 x 41	172	Pole No. 1445A, N1471	Oil Springs dist. sta...	35	132	1.42	63	26,400
1471 x 42	173	Pole No. 1445A, N1471	Brigden dist. sta.....	35	132	8.88	360	26,400
1471 x 43	131	Pole No. 1445A, N1471	Petrolia dist. sta.....	35	125	6.77	297	26,400
1476 x 45	145	Pole No. 2336, N1476..	Forest dist. sta.....	35	132	10.90	444	26,400
1476 x 46	157	Pole No. 2336, N1476..	Watford dist. sta.....	35	132	10.84	443	26,400

Lines terminating

14 x 1462	84	Kent trans. sta.....	Pole No. 41, N1462...	40	120	0.82	41	26,400
1468 x 65	123	Pole No. 68, N1468....	Pole No. 470, N1468..	35	132	9.74	402	26,400
1465 x 66	127	Pole No. 470, N1465....	Pole No. 783, N1466..	35	132	7.52	313	26,400
1465 x 67	123	Pole No. 470, N1465....	Pole No. 676, N1467..	35	132	4.78	206	26,400
14 x 1468	102	Kent trans. sta.....	Pole No. 68, N1468....	40	120	1.48	68	26,400
1468 x 69	103	Pole No. 68, N1468....	Pole No. 520, N1469..	40	120	9.98	452	26,400
1469 x 70	105	Pole No. 520, N1469....	Pole No. 795, N1470..	40	132	6.71	275	26,400
1470 x 71	131	Pole No. 795, N1470....	Pole No. 1445A, N1471	35	125	15.05	651	26,400
1475 x 74	145	Pole No. 1962, N1475..	Pole No. 2058, N1474..	35	132	2.35	96	26,400
1443 x 75	132	Petrolia dist. sta.....	Pole No. 1962, N1475..	40	125	4.89	219	26,400
1474 x 76	145	Pole No. 2058, N1474..	Pole No. 2336, N1476..	35	132	6.85	278	26,400
1475 x 77	133	Pole No. 1962, N1475..	Pole No. 2304, N1477..	35	125	7.92	342	26,400

OF LINES

KENT DISTRICT—SYMBOL N14

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at customers						
2	2/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 102	Oct. 21, 1914	Feb. 1, 1915
1	2 B.&S.G.S.R. alum.	None	1/4" galv. steel	O.B. 9403	Jan. 14, 1915	April 20, 1915
1	6 B.&S.G. M.H.D. copper	None	6 B.W.G.galv.iron	C.P. 259	Oct. 3, 1916	Nov. 6, 1916
1	6 B.&S.G. M.H.D. copper	None	6 B.W.G.galv.iron	C.P. 259	Sept. 1, 1915	Oct. 4, 1916
2	3/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	May 9, 1916	Nov. 10, 1916
1	2 B.&S.G.S.R. alum.	None	9/32" galv. steel	C.P. 105	Jan. 6, 1920	Aug. 13, 1920
1	2 B.&S.G.S.R. alum.	None	9/32" galv. steel	C.P. 105	Feb. 2, 1920	Aug. 13, 1920
1	6 B.&S.G. bare cop.	None	None	C.P. 105	April 15, 1921	June 15, 1921
2	5/16" galv. steel	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 889	Sept. 19, 1922	Nov. 19, 1922
2	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	5/16" galv. steel	C.P. 133	Oct. 24, 1921	Mar. 1, 1922
1	6 B.&S.G.h.d. cop.	None	1/4" galv. steel	C.P. 105	Apr. 10., 1922	May 8, 1922
1	2 B.&S.G.S.R. alum.	None	3 x 13 galv. steel	C.P. 105	Nov. 23, 1921	Mar. 22, 1922

at distributing stations

1	2 B.&S.G.S.R. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 133	Jan. 13, 1915	Mar. 3, 1915
1	2 B.&S.G.S.R. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	July 2, 1915	Oct. 20, 1915
1	2 B.&S.G.S.R. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	June 24, 1915	Nov. 24, 1915
1	1/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	May 18, 1915	Sept. 14, 1915
1	2 B.&S.G.S.R. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	June 26, 1915	Aug. 17, 1915
2	1-1/0 B.&S.G. alum.	10 B.&S.G. h.d.cop.	1/4" galv. steel	C.P. 133	Nov. 6, 1914	Feb. 3, 1915
2	3/0 B.&S.G. alum.	10 B.&S.G. h.d.cop.	1/4" galv. steel	C.P. 133	Nov. 3, 1914	Mar. 30, 1915
1	6 B.W.G. galv. iron	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	July 20, 1917	Dec. 5, 1917
1	6 B.W.G. galv. iron	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 889	Aug. 1, 1917	Dec. 6, 1917
2	3/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	Aug. 30, 1915	April 6, 1916
1	6 B.W.G. galv. iron	9 B.W.G. galv. iron	6 B.W.G.galv.iron	C.P. 889	June 26, 1915	Feb. 7, 1917
1	6 B.W.G. galv. iron	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 889	June 9, 1917	Aug. 10, 1917

at junctions

3	1-cir. 2 B.&S.G.S.R. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 102	Oct. 21, 1914	Feb. 1, 1915
	2-cirs. 2/0 B.&S.G. al.					
1	1/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	May 18, 1915	Sept. 14, 1915
1	2 B.&S.G.S.R. alum	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	June 24, 1915	Nov. 24, 1915
1	1/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	May 18, 1915	Sept. 14, 1915
	2-3/0 alum.			O.B. 11622		
3	1-1/0 B.&S.G. alum.	10 B.&S.G.h.d. cop.	1/4" galv. steel	C.P. 133	Oct. 28, 1914	Feb. 3, 1915
2	3/0 B.&S.G. alum.	10 B.&S.G.h.d. cop.	1/4" galv. steel	C.P. 133	Oct. 30, 1914	Feb. 3, 1915
2	3/0 B.&S.G. alum.	10 B.&S.G.h.d. cop.	1/4" galv. steel	C.P. 133	Nov. 3, 1914	Mar. 30, 1915
2	3/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	Aug. 30, 1915	April 6, 1916
1	6 B.W.G. galv. iron	9 B.W.G. galv. iron	6 B.W.G.galv.iron	C.P. 889	June 26, 1915	Feb. 7, 1917
2	3/0 B.&S.G. alu n.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	Mar. 1, 1916	Nov. 10, 1916
1	6 B.W.G. galv. iron	9 B.W.G. galv. iron	6 B.W.G.galv.iron	C.P. 889	June 26, 1915	Feb. 7, 1917
2	3/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	April 6, 1916	Nov. 10, 1916

DESCRIPTION

NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
Lines terminating								
N.	L.T.							
1562 x 1	82	Pole No. 55, N1562....	Windsor mun. sta.....	45	120	2.27	103	26,400
1562 x 2	83	Pole No. 55, N1562....	Walkerville mun. sta..	40	120	1.30	62	26,400
1502 x 5	.....	Walkerville mun. sta..	Riverside.....	35	132	4.60	7	4,000
1505 x 6	.....	Riverside.....	Tecumseth.....	35	132	2.20	2	4,000
1506 x 7	.....	Tecumseth.....	St. Clair Beach.....	.....	.....	1.20	.....	4,000
1538 x 8	.....	Belle River dist. sta...	Belle River.....	30	132	0.14	7	4,000

Lines terminating

15 x 1533	165	Essex trans. sta.....	Can. Salt. Co. dist. sta.	40	132	8.10	351	26,400
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Lines terminating

15 x 1562	81	Essex trans. sta.....	Pole No. 55, N1562...	45	120	1.10	55	26,400
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NIAGARA SYSTEM—

Lines terminating

N.	L.T.							
1663 x 3	34	Pole No. 564, N1663...	Weston mun. sta.....	40	120	1.62	75	13,200
1634 x 5	108	Woodbridge dist. sta...	Bolton.....	35	132	12.95	540	13,200
1667 x 7	110B	Pole No. 33, N1667....	Asylum Brick Yard... (Not owned by H. E.P.C.)	40	100	0.13	6	2,300
1631 x 10	.....	Etobicoke dist. sta....	Goodyear Tire & Rubber Co.	40	100	0.13	6	2,300

Lines terminating

1666 x 31	155	Pole No. 122, N1666...	Etobicoke dist. sta....	40	125	0.21	10	26,400
1661 x 32	51	Pole No. 332, N1661...	Mimico dist. sta.....	40	120	0.46	18	13,200
1663 x 34	107	Pole No. 564, N1663...	Woodbridge dist. sta..	35	132	6.44	276	13,200
1631 x 2	.....	Etobicoke dist. sta....	Mimico dist. sta.....	.....	.....	0.40	.....	4,000

Lines terminating

1631x61	36	Etobicoke dist. sta....	Pole No. 332, N1661..	45	120	0.11	6	13,200
1362x1661	36	Pole No. 84, N1362...	Pole No. 332, N1661..	45	120	5.48	250	13,200
1664x63	34	Pole No. 419, N1664..	Pole No. 564, N1663..	40	120	3.24	145	13,200
16x1666	155	York trans. sta.....	Pole No. 122, N1666..	40	125	2.59	122	26,400
1669x67	110A	Pole No. 12, N1669...	Pole No. 33, N1667...	30	125	0.55	21	2,200
1631x66	216	Etobicoke dist. sta....	Pole No. 122 (Cable only)	.....	.....	0.22	.....	2,200
1632x69	110A	Mimico dist. sta.....	Pole No. 12, N1669...	30	125	0.22	12	2,200
16x1664	.....	York trans. sta.....	Pole No. 419, N1664..	40	120	2.25	104	13,200
1631x69	.....	Etobicoke dist. sta....	Pole No. 12, N1669...	.....	.....	.....	.....	.....

OF LINES

ESSEX DISTRICT—SYMBOL N15

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at customers						
2	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 102	July 31, 1914	Sept. 18, 1914
2	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 102	June 2, 1914	Sept. 6, 1914
1	2 B.&S.G.D.B.W.P. copper	None	None	C.P. 505	.....	Aug. 3, 1922
1	4 B.&S.G.D.B.W.P. copper	None	None	C.P. 105	.....	Aug. 3, 1922
1	6 B.&S.G.D.B.W.P. copper	None	None	C.P. 105	.....	Aug. 3, 1922
1	6 B.&S.G.D.B.W.P. copper	None	6 B.&S.G. bare copper	C.P. 105	Oct. 26, 1922	.....

at distributing stations

2	1/0 B.&S.G. copper	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 889	July 10, 1917	Nov. 9, 1917
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at junctions

4	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 102	July 28, 1914	Sept. 6, 1914
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YORK DISTRICT—SYMBOL N16

at customers

2	2 B.&S.G. alum.	8 B.&S.G. c.c. steel	1/4" galv. steel	{ O.B. 12546 Thom 2041 C.P. 136	April 19, 1911	July 24, 1911
1	3/0 B.&S.G. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel		Oct. 20, 1914	Jan. 26, 1915
1	350,000 c.m. W.P. copper	None	None	C.P. 505	April 19, 1922	April 21, 1922

at distributing stations

2	1/0 B.&S.G. copper	9 B.W.G. galv. iron	9/32" galv. steel	O.B. 11622	Feb. 9, 1917	Oct. 10, 1919
1	2 B.&S.G. alum.	8 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	.....	.....
1	1/0 B.&S.G. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	C.P. 136	Sept. 25, 1914	Dec. 2, 1914
1	2/0 B.&S.G. copper	None	None	C.P. 505	.....	Oct. 19, 1921
1	4/0 B.&S.G. copper					

at junctions

2	1-2 B.&S.G.S.R. alum.	8 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	April 26, 1911	Feb. 29, 1912
2	1-2 B.&S.G. alum.					
2	1-2 B.&S.G.S.R. alum.	8 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	April 26, 1911	Feb. 29, 1912
2	1-2 B.&S.G. alum.			O.B. 12546		
2	2 B.&S.G. alum.	8 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2041	April 19, 1911	July 24, 1911
2	1/0 B.&S.G. copper	9 B.W.G. galv. iron.	9/32" galv. steel	O.B. 11622	Feb. 9, 1917	Oct. 10, 1919
1	2/0 B.&S.G. copper	None	1/4" galv. steel	O.B. 9403	Oct. 24, 1914	Feb. 17, 1915
1	2/0 B.&S.G. copper	None		.....	
1	2/0 B.&S.G. copper	Line disconnected	1/4" galv. steel	O.B. 9403	Oct. 24, 1914	Feb. 17, 1915
2	3/0 B.&S.G. alum.	10 B.&S.G. c.c. steel	5/16" galv. steel	O.B. 12546	Aug. 3, 1922	Nov. 19, 1922
2	2/0 B.&S.G. copper	None	None	.....	

DESCRIPTION

THOROLD SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age
I. 51 x 1	L.T.	Jct. with O.P.Co. lines..	Thorold dist. sta.....	35	120	1.04	46	12,000

ESSEX COUNTY SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age
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Lines terminating

J. 51 x 1	L.T. 188	Pole No. 231, J51.....	Canard River dist.sta.	35	160	6.00	190	26,400
52 x 2	190	Pole No. 642, J52.....	Amherstburg dist. sta.	35	160	2.30	78	26,400
52 x 3	191	Pole No. 642, J52.....	Harrow dist. sta.....	35	160	12.75	401	26,400
54 x 4	193	Pole No. 1374, J54....	Kingsville dist. sta....	35	160	0.50	7	26,400
55 x 5	195	Pole No. 1412, J55....	Leamington dist. sta..	35	160	7.50	289	26,400
56 x 6	187	Pole No. 1605, J56....	Cottam dist. sta.....	35	160	0.80	22	26,400
56 x 7	197	Pole No. 1605, J56....	Essex dist. sta.....	35	160	4.70	157	26,400
58 x 801	.....	Canard dist. sta.....	H.E.P.C. Petrimoux sub. sta.....	35	132	1.13	46	26,400

Lines terminating

15 x 51	185	Essex trans. sta.....	Pole No. 231, J51....	.....	.....	5.30	.....	26,400
		Conductors and Cross Arms only carried on N			15x15	33 poles		
1 x 52	189	Canard River dist. sta..	Pole No. 642, J22....	35	160	7.25	220	26,400
3 x 54	192	Harrow dist. sta.....	Pole No. 1374, J54....	35	160	9.70	334	26,400
54 x 55	194	Pole No. 1374, J54....	Pole No. 1412, J55....	35	160	0.70	38	26,400
55 x 56	196	Pole No. 1412, J55....	Pole No. 1605, J56....	35	160	5.20	193	26,400

OF LINES

SYMBOL "I"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
1	3 B. & S.G. copper	12 B.W.G. galv. iron	None	Vic. 407	.....	1912

SYMBOL "J"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
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at distributing stations

1	1/0 B. & S.G. alum.	None	None	8 1/2" x 10"	April, 1914	Nov., 1914
2	1/0 B.&S.G. alum.	None	None	Similar	July, 1913	Nov., 1914
1	1/0 B.&S.G. alum.	None	None	to O.B.	July, 1913	Nov., 1914
2	1/0 B.&S.G. alum.	None	None	No. 9416	July, 1913	Nov., 1914
1	1/0 B.&S.G. alum.	None	None	No. 9416	May, 1915	Aug., 1915
1	1/0 B.&S.G. alum.	None	None	No. 9416	Aug., 1915	Oct., 1915
1	1/0 B.&S.G. alum.	None	None	No. 9416	Aug., 1915	Sept., 1915
1	2 B.&S.G.S.R. alum.	None	None	C.P. 889	Sept. 7, 1922	Oct. 25, 1922

at junctions

1	2 B.&S.G. bare str'd copper	None	None	C.P. 889	Sept. 24, 1918	Feb. 1, 1919
1	1/0 B.&S.G. alum.	None	None	8 1/2" x 10"	May, 1914	Nov., 1914
1	1/0 B.&S.G. alum.	None	None	Similar	June, 1913	Nov., 1914
1	1/0 B.&S.G. alum.	None	None	to O.B.	July, 1915	Aug., 1915
1	1/0 B.&S.G. alum.	None	None	No. 9416	Aug., 1915	Sept., 1915

DESCRIPTION									
ONTARIO POWER COMPANY									
New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage	
A 2 x 71	1 & 2	O.P.Co. trans. sta.....	Niagara River crossing No. 1 Trunk	50' towers	550	6.01	73	60,000	
			No. 2 Trunk	50' towers	550	6.01	72	60,000	
15 x 2	22 & 23	T.P.Co. gen. sta.....	O.P. Co. dist. sta.....	40	120	1.13	60	12,000	
2 x 264	A. & B.	O.P. Co. dist. sta.....	Jct. 358, A264.....	35	120	6.80	358	12,000	
264 x 76	A. & B.	Jct. 358, A264.....	Jct. 419, A276.....	35	120	1.37	61	12,000	
276 x 77	A. & B.	Jct. 419, A276.....	Jct. 443, A277.....	35	120	0.53	24	12,000	
277 x 19	A. & B.	Jct. 443, A277.....	Ont. Paper Co.....	35	120	0.42	21	12,000	
264 x 4	A. & B.	Jct. 358, A264.....	Port Robinson.....	35	120	2.00	122	12,000	
276 x 16	A. & B.	Jct. 419, A276.....	Pilkington Glass Wks.	35	120	0.04	2	12,000	
277 x 18	A. & B.	Jct. 443, A277.....	Beaver Board Co.....	35	120	0.04	2	12,000	
2 x 261	C. & D.	O.P. Co. dist. sta.....	Jct. 18, A261.....	35	120	0.41	18	12,000	
261 x 81	C. & D.	Jct. 18, A261.....	Jct. 76, A281.....	35	120	1.32	58	12,000	
270 x 10	C. & D.	Jct. to Ramapo I.W., A270	Ramapo Iron Works..	35	120	0.80	37	12,000	
2 x 63	E. & F.	Transformer sta.....	Tie Jct. 12 & 30 k-v., A63	30 & 35	120	13.20	613	30,000	
63 x 72	E. & F.	Tie Jct. 12 & 30 k-v., A63	Electro Metals, jct. A72	.....	.....	0.64	.....	30,000	
72 x 3	E. & F.	Jct. to Electro Met.A72	Port Colborne sta.....	35	100	5.50	290	30,000	
72 x 12	E. & F.	Jct. to Electro Met.A72	Electro Metals Co....	50	120	0.04	1	30,000	
272 x 74	G. & H.	Jct. to Elec. Met., A272	Jct. to P.H.Co., A274.	35	120	0.15	7	12,000	
273 x 80	G. & H.	Jct. to Can.S.F'y, A273	Jct. to Emp.C.Co.A280	35	120	0.13	6	12,000	
63 x 273	G. & H.	Tie Jct. 12 & 30 k-v,A63	Jct. to Can.S.F'y,A273	35	120	0.07	4	12,000	
280 x 20	G. & H.	Jct. to Emp.C.Co., A280	Empire Cotton Co....	35	120	1.70	75	12,000	
274 x 14	G. & H.	Jct. to P.H. Co., A274	Page Hersey Co.....	35	120	0.20	9	12,000	
273 x 13	G. & H.	Jct. to Can.S.F'y, A273	Can. Steel Foundry...	35	120	0.25	14	12,000	
272 x 12	G. & H.	Jct. El. M. Co., A272..	Electro Metals Co....	45	120	0.36	16	12,000	
274 x 45	G. & H.	Jct. to P.H. Co., A274.	Dain Co. sta.....	35	120	1.29	67	12,000	
281 x 72	G. & H.	Jct. to Chippawa, A281	Jct. to El.M.Co., A272	30	120	11.79	519	12,000	
	G. & H.	Jct. to Chippawa, A281	Tor. Power Co., tap..	35	120	0.64	28	12,000	
280 x 72	G. & H.	Jct. to Emp.C.Co.,A280	Jct. to El.M.Co., A272	35	120	0.25	10	12,000	
2 x 268	J. & K.	O.P. Co. dist. sta.....	Jct. to Con.R.Co.A268	35	120	7.52	331	12,000	
277 x 17	J. & K.	Con.R.Co. tap, A277 ..	Coniagas Rad. Co....	35	120	0.45	18	12,000	
219 x 77	J. & K.	Ontario Paper Co.....	Con.R.Co. tap, A277 ..	50	120	0.13	7	12,000	
277 x 63	J. & K.	Can.R.Co. tap, A277 ..	Jct. to Thorold, A263.	35	120	0.90	40	12,000	
263 x 38	J. & K.	Jct. to Thorold, A263..	Merritton sta.....	35	120	2.20	110	12,000	
2 x 209	L. & M.	O.P. Co. dist. sta.....	Amer. Cyanamide Co.	35	120	2.60	162	12,000	
2 x 269	O. & P.	O.P. Co. dist. sta.....	Jct. to Nia. Falls,A269	35	120	1.84	100	12,000	
269 x 9	O. & P.	Jct. to Nia. Falls, A269	Amer. Cyanamide Co.	35	120	0.76	41	12,000	
2 x 266	R. & S.	O.P. Co. dist. sta.....	Jct. to C.N.P.Co.A266	35	120	0.74	30	12,000	
266 x 81	R. & S.	Jct. to C.N.P. Co. A266	Jct. to Chippawa,A281	35	120	0.98	40	12,000	
281 x 6	R. & S.	Jct. to Chippawa, A281	Montrose dist. sta....	35	130	1.23	50	12,000	
281 x 65	R. & S.	Jct. to Chippawa, A281	Jct. to N.D.Chip.A265	35	120	2.35	103	12,000	
265 x 21	R. & S.	Jct. to N.D. Chip., A265	Chippawa.....	35	120	0.15	7	12,000	
	R. & S.	Chippawa sta.....	Norton Co.....	35	120	0.22	10	12,000	
16 x 266	R. & S.	Can. Nia. Power Co....	Jct. to C.N.P.Co.A266	.....	.....	.....	30	12,000	
364 x 34	W. & X.	Jct. to C.Cork Co.,A364	Can. Cork Co.....	40	120	0.12	6	12,000	
3 x 364	W. & X.	Port Colborne Sta....	Jct. to C.Cork Co.A364	40	120	0.10	6	12,000	
363 x 3	Y. & Z.	Jct. to C.Cem.Co.,A363	Can. Cement Co.....	40	120	1.43	67	12,000	
364 x 32	Y. & Z.	Jct. to C.Cork Co.,A364	Gov. Elev. sta.....	.....	.....	1.00	.....	12,000	
3 x 363	Y. & Z.	Port Colborne sta.....	Jct. to C.Cem.Co.A363	.....	.....	.....	.....	12,000	
2 x 201	.....	O.P. Co. dist. sta.....	H.E.P.C. (cable).....	.....	.....	.....	.....	12,000	
2 x 207	.....	O.P. Co. dist. sta.....	Nia. Falls W.W.(cable)	.....	.....	.....	.....	2,200	
2 x 211	.....	O.P. Co. dist. sta.....	Q.V.N.F. Park (Table	Rock	House)	.....	.....	2,200	
N179x19	.....	Port Colborne sta.....	Intern'l Nickel Co....	40	125	1.00	46	30,000	

NOTE.—For inter-connected lines at 12,000 volts, see Niagara System (N) Niagara District Sheet

OF LINES

SYSTEM—SYMBOL “A”

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
1	820,000 c.m. alum.	12 B.&S.G. copper	None	Thom 14/0 C.P. 2325 C.P. 1530	1904	July 22, 1906
1	820,000 c.m. alum.	.....	None	Thom 14/0 C.P. 2325 C.P. 1530	1904	July 22, 1906
2	500,000 c.m. alum.	None	None	Vic. 407	Oct., 1915	Oct., 1915
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	Oct. 12, 1906
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	.....
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	.....
1	3 B.&S.G. copper	12 B.W.G. galv. iron	None	Vic. 407	.....	Dec. 11, 1913
2	3 B.&S.G. copper	12 B.W.G. galv. iron	None	Vic. 407	.....	Oct. 12, 1906
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	.....
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	Dec. 11, 1913
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	Nov. 5, 1910
1	3 B.&S.G. copper	12 B.W.G. galv. iron	None	Vic. 407	.....	Nov., 5, 1910
		None	None	Vic. 407	.....	July 14, 1907
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 2872	.....	Sept. 28, 1913
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 2872	.....	.....
2	211,950 c.m. alum.	12 B.&S.G. copper	None	Property of	Dept. of Rys. and Canals	.....
2	2/0 B.&S.G. copper	.....	None	Vic. 2872	.....	Nov., 1913
2	3 B.&S.G. copper	12 B.W.G. galv. iron	None	Vic. 407	.....	Aug. 16, 1913
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	.....
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	.....
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	.....
2	173,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	May 3, 1913
2	3 B.&S.G. copper	12 B.W.G. galv. iron	None	Vic. 407	.....	1911
2	3 B.&S.G. copper	12 B.W.G. galv. iron	None	Vic. 407	.....	1906
2	3 B.&S.G. copper	.....	None	Vic. 407	.....	.....
2	1/0 B.&S.G. copper	None	None	Vic. 407	.....	.....
1	173,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	Oct., 1912	Aug. 16, 1913
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	Nov. 5, 1910
2	345,000 c.m. alum.	.....	None	Vic. 407	.....	April 11, 1909
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	.....
2	500,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	Sept. 10, 1912
2	6 B.&S.G. copper	12 B.W.G. galv. iron	None	Vic. 407	.....	May 6, 1908
2	500,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	Sept. 10, 1912
2	3 B.&S.G. copper	.....	None	Vic. 407	.....	May, 6, 1908
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	Oct. 6, 1912
2	500,000 c.m. alum.	.....	None	Vic. 407	.....	June 24, 1913
2	500,000 a.m. alum.	.....	None	Vic. 407	.....	Mar. 31, 1914
2	500,000 c.m. alum.	.....	None	Vic. 407	.....	Mar. 31, 1914
2	345,000 c.m. alum.	None	None	Vic. 407	.....	Apr. 11, 1909
2	345,000 c.m. alum.	None	None	Vic. 407	.....	Apr. 11, 1909
2	336,400 c.m. S.R.A.C.	None	None	O.B. 12546	.....	Dec. 8, 1919
2	173,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	July 5, 1910
2	173,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	July 5, 1910
2	173,000 c.m. alum.	Line not in use and	not connected	.....	.....	July 5, 1910
2	Not in use.	.....	None	.....	.....	.....
1	173,000 c.m. alum.	None	None	Vic. 407	.....	Nov. 12, 1911
2	173,000 c.m. alum.	None	None	Vic. 407	.....	Sept. 28, 1913
2	2/0 B.&S.G. copper	.....	None	Vic. 407	.....	.....
2	173,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	May 1, 1908
2	211,950 c.m. alum.	Property of Dept. of	Rys. and Canals	.....	.....	Sept. 28, 1913
.....	Cables under Welland	Canal	.....	.....	.....	.....
2	.....	None	None	.....	.....	.....
2	105,530 c.m. S.R.A.C.	10 B.&S.G. c.c. steel	None	C.P. 1162	Aug., 1922	Sept. 20, 1922

DESCRIPTION

SEVERN SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age
Lines terminating								
S.	S.L.							
.67 x 1	16	Pole No. 431, S67.....	Midland dist. sta.....	40	100	5.30	272	22,000
1 x 2	17	Midland dist. sta.....	Penetang dist. sta.....	40	120	3.03	143	22,000
.72 x 4	22	Pole No. 1590, S72.....	Barrie dist. sta.....	40	120	1.57	64	22,000
.60 x 5	9	Pole No. 1786, S60....	Collingwood dist. sta..	40	120	12.04	525	22,000
.56 x 6	2	Pole No. 193, S56.....	Coldwater dist. sta....	40	120	1.16	55	22,000
.57 x 7	4	Pole No. 903, S57.....	Elmvale dist. sta.....	40	120	0.42	19	22,000
20 x 9	23	Big Chute gen. sta.....	Swift Rapid gen. sta..	30	120	7.50	328	22,000
.60 x 10	8	Pole No. 1786, S60....	Stayner dist. sta.....	40	120	1.50	69	22,000
.69 x 19	13	Pole No. 188, S69.....	Victoria Harbor dist. sta.	40	120	1.52	82	22,000
.71 x 21	20	Pole No. 401, S71.....	C.P.R. elev. dist. sta..	35	125	1.33	58	22,000
.72 x 22	21	Pole No. 1590, S72....	Camp Borden dist. sta	35	132	14.76	604	22,000
.84 x 32	29	Pole No. 2701, S84....	Alliston dist. sta.....	40	125	1.82	86	22,000
.83 x 33	32	Pole No. 2984, S83....	Beeton dist. sta.....	40	125	1.76	84	22,000
.83 x 34	31	Pole No. 2984, S83....	Tottenham dist. sta...	40	125	3.61	177	22,000
.87 x 35	27	Pole No. 2282, S87....	Cookstown dist. sta...	40	125	2.24	98	22,000
.86 x 36	35	Pole No. 2021, S86....	Thornton dist. sta....	40	125	1.85	81	22,000
.62 x 37	34	Pole No. 2451, S62....	Bradford dist. sta....	40	125	7.25	319	22,000

Lines terminating

10 x 1002	10	Stayner dist. sta.....	Creemore.....	35	120	7.68	347	4,000
51 x 11	.....	Pole No. 185, S51.....	Tiffin Elevator Co....	40	125	0.41	17	22,000

Lines terminating

20 x 52	11	Big Chute gen. sta....	Waubauskene sw. sta.	35	120	12.00	{504 527	22,000
.57 x 54	5	Pole No. 903, S57.....	Pole No. 1110, S54...	40	120	4.57	207	22,000
.52 x 56	1	Waubauskene sw. sta..	Pole No. 193, S56....	40	120	3.68	163	22,000
.56 x 57	3	Pole No. 193, S56.....	Pole No. 903, S57....	40	120	15.86	711	22,000
.54 x 60	7	Pole No. 1110, S54....	Pole No. 1786, S60...	40	120	15.07	676	22,000
4 x 61	24	Barrie dist. sta.....	Pole No. 1834, S61...	40	125	3.88	180	22,000
.87 x 62	33	Pole No. 2282, S87....	Pole No. 2451, S62...	40	125	3.87	169	22,000
.71 x 67	19	Pole No. 401, S71.....	Pole No. 431, S67....	35	100	0.56	30	22,000
.52 x 69	12	Waubauskene sw. sta..	Pole No. 188, S69....	40	100	3.59	188	22,000
.69 x 71	14	Pole No. 188, S69.....	Pole No. 401, S71....	40	100	4.03	213	22,000
.54 x 72	6	Pole No. 1110, S54....	Pole No. 1590, S72...	40	120	10.76	480	22,000
.84 x 83	30	Pole No. 2701, S84....	Pole No. 2984, S83...	40	125	6.30	283	22,000
.35 x 84	28	Cookstown dist. sta....	Pole No. 2701, S84....	40	125	7.35	321	22,000
.61 x 86	25	Pole No. 1834, S61....	Pole No. 2021, S86....	40	125	4.28	187	22,000
.86 x 87	26	Pole No. 2021, S86....	Pole No. 2282, S87....	40	125	5.99	261	22,000

OF LINES

SYMBOL "S"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at stations						
2	1-2/0 B.&S.G. alum.	1-12 B.W.G.galv.ir.	1/4" galv. steel	C.P. 889	April 11, 1917	May 22, 1917
2	1-1/0 B.&S.G.s.r.al	1-10 B.&S.G.c.c.st'l		Pittsburg		
2	2 B.&S.G. std.copper	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 889	June 7, 1911	July 18, 1911
2	2/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2111	Nov. 6, 1912	April 6, 1913
2	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 889	Nov. 1, 1912	Feb. 24, 1913
				Thom 2111		
1	2 B.&S.G. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2111	Sept. 20, 1912	Feb. 24, 1913
1	2 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2111	Feb. 1, 1913	May 27, 1913
1	2 B.&S.G. alum.	10 B.&S.G. copper	5/16" galv. steel	O.B. 9410		
1	2 B.&S.G. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	Thom 2111	Jan. 24, 1913	Feb. 25, 1913
1	2 B.&S.G. alum.	12 B.W.G.galv.iron	1/4" galv. steel	C.P. 188		
				Pittsburg		
2	1/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 12547	Feb. 29, 1916	July 24, 1916
1	6 B.&S.G. M.h.d. copper	9 B.W.G. galv. iron	6 B.W.G.galv.iron	C.P. 136	May 30, 1916	June 29, 1916
1	125,000 c.m.s.r.alum	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 889	Dec. 8, 1917	May 23, 1918
1	5/16" galv. steel	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 889	Feb. 28, 1918	July 26, 1918
1	5/16" galv. steel	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 889	Jan. 30, 1918	Sept. 9, 1918
1	125,000 c.m.s.r.alum	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 889	Nov. 8, 1917	April 25, 1918
1	5/16" galv. steel	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 889	June 15, 1918	Oct. 16, 1918
1	5/16" galv. steel	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 889	Mar. 19, 1918	Sept. 16, 1918

at customers

1	1/0 B.&S.G. alum.	None	1/4" galv. steel	P. 2822	Aug. 15, 1914	Oct. 21, 1914
2	2 B.&S.G. s.r. alum.	9 B.W.G.galv. iron	5/16" galv. steel	C.P. 889	Aug. 25, 1922	Sept. 15, 1922

at junctions

2	4/0 B.&S.G. alum.	9 B.W.G.galv.iron	1/4" galv. steel	Thom 2111	.....	1915
	4/0 B.&S.G. s.r. al.	12 B.W.G.galv.iron				
		9 B.W.G.galv.iron				
2	4/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2111	Oct. 20, 1912	Feb. 24, 1913
		9 B.W.G.galv.iron				
2	4/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2111	Sept. 20, 1912	Feb. 24, 1913
		9 B.W.G.galv.iron				
2	4/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2111	Sept. 25, 1912	Feb. 24, 1913
				C.P. 889		
2	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2111	Oct. 23, 1912	Feb. 24, 1913
1	125,000 c.m.s.r.alum	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 889	Sept. 13, 1917	April 25, 1918
1	5/16" galv. steel	9 B.W.G.galv.iron	9/32" galv. steel	C.P. 889	May 29, 1918	Sept. 16, 1918
2	2/0 B.&S.G. alum.	12 B.W.G.galv.iron	.....	Pittsburg	.....	.....
	1/0 B.&S.G. s.r. al'm			O.B. 12547		
2	1/0 B.&S.G. s.r. al'm	12 B.W.G.galv.iron	.....	Pittsburg	April 1, 1916	July 24, 1916
	2/0 B.&S.G. alum.			O.B. 12547		
2	2/0 B.&S.G. alum.	12 B.W.G.galv.iron	.....	C.P. 133	Mar. 7, 1916	July 24, 1916
	1/0 B.&S.G. s.r. al'm			Pittsburg		
2	2/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2111	Nov. 6, 1912	April 6, 1913
1	5/16" galv. steel	9 B.W.G.galv.iron	9/32" galv. steel	C.P. 889	Jan. 2, 1918	July 26, 1918
1	125,000 c.m.s.r.alum	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 889	Nov. 16, 1917	May 23, 1918
1	125,000 c.m.s.r.alum	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 889	Oct. 6, 1917	April 25, 1918
1	125,000 c.m.s.r.alum	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 889	Oct. 20, 1917	April 25, 1918

DESCRIPTION

EUGENIA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age
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Lines terminating

E.	E.F.L.							
65 x 2	2	Pole No. 1141A, E65 ..	Owen Sound dist. sta..	40	125	5.28	227	22,000
52 x 3	1	Pole No. 316, E52.....	Chatsworth dist. sta. .	40	125	15.27	658	22,000
17 x 4	8	Elmwood dist. sta.	Chesley dist. sta.....	40	125	6.07	259	22,000
55 x 5	9	Pole No. 297, E55.....	Dundalk dist. sta.....	40	125	11.44	499	22,000
56 x 6	25	Pole No. 1015, E56....	Durham Cem. Co. sta.	Line not in operation				
57 x 7	4	Pole No. 971, E57.....	Durham dist. sta.....	40	125	0.17	14	22,000
54 x 8	11	Pole No. 1491, E54....	Hanover dist. sta.....	40	125	0.76	33	22,000
59 x 9	5	Pole No. 1326, E59....	Mt. Forest dist. sta...	40	125	7.49	336	22,000
5 x 10	10	Dundalk dist. sta.	Shelburne dist. sta....	40	125	13.12	565	22,000
64 x 11	20	Pole No. 187, E64.....	Collingwood dist. sta..	35	125	20.17	883	22,000
62 x 12	17	Pole No. 1987, E62....	Orangeville dist. sta...	30	130	0.21	13	22,000
63 x 13	6	Pole No. 1798, E63....	Grand Valley dist. sta.	35	132	8.98	384	22,000
65 x 15	15	Pole No. 1141A, E65 ..	Kilsyth dist. sta.....	40	125	4.80	206	22,000
54 x 17	8	Pole No. 1491, E54.....	Elmwood dist. sta.....	40	125	4.99	214	22,000
55 x 18	4	Dundalk, Pole 297, E55	Priceville dist. sta.....	40	125	5.71	243	22,000
74 x 25	.....	Kinloss No. 2393, E74.	Kincardine dist. sta....	35	132	12.71	517	40,000
74 x 24	.....	Kinloss No. 2393, E74	Holyrood dist. sta. ...	35	132	6.20	224	40,000
72 x 22	.....	Wingham No. 2759, E72	Wingham dist. sta....	35	132	4.11	170	40,000
71 x 21	.....	Teeswater, No. 2172, E71	Teeswater dist. sta....	35	132	7.01	284	40,000
76 x 26	.....	Walkerton Quarry, 1977 E76	Walkerton Quarry sta.	35	132	0.25	12	40,000

Lines terminating

1 x 52	1	Eugenia gen. sta.....	Pole No. 316, E52....	40	125	7.28	316	22,000
58 x 54	7	Pole No. 964, E58.....	Pole No. 1491, E54....	40	125	12.11	527	22,000
1 x 55	3	Eugenia gen. sta.....	Pole No. 297, E55....	40	125	6.78	297	22,000
57 x 56	5	Pole No. 971, E57.....	Pole No. 1015, E56....	40	125	0.84	36	22,000
58 x 57	4	Pole No. 964, E58.....	Pole No. 971, E57....	40	125	0.12	7	22,000
18 x 58	4	Priceville dist. sta.....	Pole No. 964, E58....	40	125	9.97	423	22,000
56 x 59	5	Pole No. 1015, E56....	Pole No. 1326, E59....	40	125	7.36	319	22,000
10 x 60	17	Shelburne dist. sta.....	Pole No. 1380, E60....	30	130	0.49	19	22,000
63 x 62	17	Pole No. 1798, E63....	Pole No. 1987, E62....	30	130	4.50	198	22,000
60 x 63	17	Pole No. 1380, E60....	Pole No. 1798, E63....	30	130	10.20	418	22,000
1 x 64	19	Eugenia gen. sta.....	Pole No. 187, E64....	35	125	4.04	187	22,000
3 x 65	2	Chatsworth dist. sta. .	Pole No. 1141A, E65 .	40	125	3.92	168	22,000
8 x 70	.....	Hanover dist. sta.....	Pole No. 1822, E70....	40	132	7.27	297	40,000
76 x 71	.....	Pole No. 1977, E76....	Pole No. 2172, E71....	40	132	4.84	195	40,000
21 x 72	.....	Teeswater dist. sta.....	Pole No. 2758, E72....	35	132	7.53	303	40,000
71 x 74	.....	Pole No. 2172, E71....	Pole No. 2393, E74....	35	132	5.51	222	40,000
70 x 76	.....	Walkerton, Pole No. 1822, E70	Pole No. 1977, E76....	40	132	3.81	155	40,000
8 x 863	26	Hanover dist. sta.....	Pole No. 161, E863....	30	132	2.73	161	4,000

OF LINES

SYMBOL "E"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
2	3/0 B.&S.G. alum.	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 133	April 7, 1915	Nov. 18, 1915
2	3/0 B.&S.G. alum.	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 133	Mar. 17, 1915	Nov. 18, 1915
1	3/0 B.&S.G. alum.	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 133	Dec. 4, 1915	June 18, 1916
1	1/0 B.&S.G. alum.	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 133	May 20, 1915	Nov. 18, 1915
	Dismantled October, 1922					
2	3/0 B.&S.G. alum.	6 B.&S.G.S.R.alum	1/4" galv. steel	C.P. 133	April 13, 1915	Nov. 18, 1915
3	1-1/0 B.&S.G.S.R.al	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 133	Aug. 18, 1916	Sept. 16, 1916
2	2-3/0 B.&S.G.S.R.al	6 B.&S.G.S.R.alum	1/4" galv. steel	C.P. 133	April 26, 1915	Nov. 18, 1915
	1-3/0 B.&S.G. alum.	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 133	June 9, 1915	Nov. 18, 1915
	1-5/16" steel	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 133	Aug. 14, 1916	Oct. 6, 1916
1	1/0 B.&S.G. alum.	9 B.W.G.galv. iron	1/4" galv. steel	C.P. 133	Built by P.R.	Devel. Co.
1	1/0 B.&S.G. copper	9 B.W.G.galv. iron	1/4" galv. steel	C.P. 889	July 21, 1916	Dec. 1, 1916
1	6 B.&S.G. copper	10 B.W.G.galv.iron	.....	C.P. 889 & special		
1	6 B.&S.G. M.H.D. copper	9 B.W.G.galv. iron	1/4" galv. steel	C.P. 889	Nov. 7, 1916	Jan. 1, 1918
1	6 B.W.G. galv. iron	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 133	Dec. 4, 1915	June 18, 1916
1	3/0 B.&S.G. alum.	9 B.W.G.galv. iron	1/4" galv. steel	C.P. 133	April 13, 1915	Nov. 18, 1915
2	3/0 B.&S.G. alum.	6 B.&S.G.S.R.alum	1/4" galv. steel	C.P. 133	Aug. 11, 1920	Jan. 11, 1921
1	1/0 B.&S.G.S.R.al'm	6 B.&S.G.S.R. al'm	5/16" galv. steel	C.P. 1162	Sept. 13, 1920	Jan. 11, 1921
1	5/16" galv. steel	9 B.W.G. galv.iron	5/16" galv. steel	C.P. 1162	Oct. 14, 1920	Dec. 21, 1920
1	1/0 B.&S.G.S.R.al'm	6 B.&S.G.S.R. al'm	5/16" galv. steel	C.P. 1162	May 27, 1920	Dec. 19, 1920
1	1/0 B.&S.G.S.R.al'm	6 B.&S.G.S.R. al'm	5/16" galv. steel	C.P. 1162	Dec. 1, 1920	Feb. 2, 1921
1	2 B.&S.G.S.R. alum.	9 B.W.G. galv. iron	4 x 12 galv. steel	C.P. 1162		

at junctions

2	3/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	Mar. 17, 1915	Nov. 18, 1915
2	1-3/0 B.&S.G.S.R.al	6 B.&S.G.S.R. al'm	1/4" galv. steel	C.P. 133	Oct. 19, 1915	June 18, 1916
	1-3/0 B.&S.G. alum.					
2	3/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	April 10, 1915	Nov. 18, 1915
	1-3/0 B.&S.G. alum.					
2	1-5/16" steel	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	April 26, 1915	Nov. 18, 1915
2	3/0 B.&S.G. alum.	6 B.&S.G.S.R. al'm	1/4" galv. steel	C.P. 133	April 13, 1915	Nov. 18, 1915
2	3/0 B.&S.G. alum.	6 B.&S.G.S.R. al'm	1/4" galv. steel	C.P. 133	April 13, 1915	Nov. 18, 1915
	1-3/0 B.&S.G. alum.					
2	1-5/16" steel	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	April 26, 1915	Nov. 18, 1915
1	6 B.&S.G. copper	10 B.W.G.galv.iron	.....	C.P. 889 & special	Built by P.R.	Devel. Co.
1	6 B.&S.G. copper	10 B.W.G.galv.iron	.....	C.P. 889 & special	Built by P.R.	Devel. Co.
1	6 B.&S.G. copper	10 B.W.G.galv.iron	.....	C.P. 889 & special	Built by P.R.	Devel. Co.
1	1/0 B.&S.G. copper	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 889	Aug. 21, 1916	Oct. 6, 1916
2	3/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	April 7, 1915	Nov. 18, 1915
1	1/0 B.&S.G.S.R.al'm	6 B.&S.G.S.R. al'm	5/16" galv. steel	C.P. 889	May 22, 1920	Dec. 19, 1920
1	1/0 B.&S.G.S.R.al'm	6 B.&S.G.S.R.al'm	5/16" galv. steel	C.P. 889	June 8, 1920	Dec. 19, 1920
				C.P. 1162		
1	1/0 B.&S.G.S.R.al'm	6 B.&S.G.S.R. al'm	5/16" galv. steel	C.P. 1162	July 9, 1920	Dec. 21, 1920
1	1/0 B.&S.G.S.R.al'm	6 B.&S.G.S.R. al'm	5/16" galv. steel	C.P. 1162	July 30, 1920	Jan. 11, 1921
1	1/0 B.&S.G.S.R.al'm	6 B.&S.G.S.R. al'm	5/16" galv. steel	C.P. 889		
				C.P. 1162		
1	3/0 B.&S.G.S.R.al'm	None	6 B.W.G.galv.iron	C.P. 105	June 8, 1920	Dec. 19, 1920
					Nov. 1, 1917	Dec. 12, 1917

DESCRIPTION

EUGENIA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt- age
Lines terminating								
E.	E.F.L.							
1 x 101	12	Eugenia gen. sta.....	Markdale.....			7.28		4,000
1 x 102	13	Eugenia gen. sta.....	Flesherton.....			6.78		4,000
7 x 702	14	Durham dist. sta.....	Holstein.....	30	130	2.63	96	4,000
863 x 2	28	Pole No. 161, E863....	Neustadt.....	30	132	2.36	96	4,000
863 x 3	27	Pole No. 161, E863....	Carlsruhe.....	30	132	1.22	57	4,000
10x1002	18	Shelburne dist. sta....	Horning's Mills.....	30	130	5.53	234	4,000
12x1202	21	Orangeville dist. sta....	Alton's Foundry.....	30	132	5.75	249	4,000
13x1302	22	Grand Valley dist. sta..	Arthur.....	30	120	12.36	531	4,000
15x1501	16	Kilsyth dist. sta.....	Tara.....	40	125	6.80	291	4,000
24x2402	.....	Holyrood dist. sta.....	Lucknow.....	30	150	4.76	170	4,000
24x2403	.....	Holyrood dist. sta.....	Ripley.....	30	150	6.14	218	4,000
57x29	.....	Pole No. 1007, E57....	J. E. Russell Co.....	35	.....	.05	2	22,000

OF LINES

SYMBOL "E"—Continued

No. of cir- cuits	Size and material of power cable	Size and material of telephone wire	Size and ma- terial of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at customers						
1	2 B.&S.G.S.R. alum.	.....	.....	O.B. 9403	Dec. 28, 1915	Feb. 8, 1916
1	2 B.&S.G.S.R. alum.	.....	.....	O.B. 9403	June 4, 1915	Nov. 18, 1915
1	2 B.&S.G.S.R. alum.	.....	1/4" galv. steel	O.B. 9403	Dec. 10, 1915	April 3, 1916
1	3/0 B.&S.G. alum.	.....	6 B.W.G.galv.iron	C.P. 105	Oct. 10, 1918	Nov. 17, 1918
1	6 B.&S.G. M.H.D.	.....	6 B.W.G.galv.iron	C.P. 505	Sept. 26, 1918	Nov. 17, 1918
	copper	.....	.....	.....	.....	.....
1	6 B.&S.G. M.H.D.	.....	10 B.W.G.galv.ir.	.....	Built by P.R.	Devel. Co.
	copper	.....	.....	.....	.....	.....
1	4 B.&S.G. M.H.D.	.....	6 B.W.G.galv.iron	O.B. 9403	Oct. 17, 1916	Nov. 27, 1916
	copper	.....	.....	.....	.....	.....
1	4 B.&S.G. M.H.D.	.....	6 B.W.G.galv.iron	O.B. 9403	Oct. 30, 1916	Feb. 19, 1917
	copper	.....	.....	.....	.....	.....
1	6 B.&S.G. M.H.D.	9 B.W.G. galv. iron	1/4" galv. steel...	C.P. 259	Oct. 12, 1916	Jan. 1, 1918
	copper	.....	.....	Brown	.....	.....
1	2 B.&S.G.S.R. alum.	.....	1/4" galv. steel...	C.P. 505	Sept. 22, 1920	Jan. 11, 1921
1	2 B.&S.G.S.R. alum.	.....	1/4" galv. steel...	C.P. 505	Nov. 5, 1920	Jan. 12, 1921
2	3/0 B.&S.G. alum.	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 889	April 28, 1922	April 30, 1922

DESCRIPTION

WASDELLS SYSTEM—								
New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age

Lines terminating								
W.	W.L.							
52 x 2	2	Pole No. 1203, W52...	Beaverton dist. sta....	40	120	1.49	70	22,000
53 x 3	3	Pole No. 1559, W53...	Cannington dist. sta. .	40	120	1.86	86	22,000
54 x 4	8	Pole No. 183, W54....	Severn Sys. (Longford)	35	132	6.41	267	22,000
56 x 6	.....	Pole No. 1011, W56...	Kirkfield dist. sta.....	35	150	11.34	412	22,000
3 x 7	.....	Cannington dist. sta. .	Greenbank dist. sta....	35	175	15.18	463	22,000

Lines terminating								
54 x 51	1	Pole No. 183, W54....	Pole No. 832, W51. .	40	120	14.34	649	22,000
56 x 52	1	Pole No. 1011, W56...	Pole No. 1203, W52 ..	40	120	4.32	193	22,000
57 x 53	3	Pole No. 1408, W57. .	Pole No. 1559, W53...	40	120	3.34	151	22,000
1 x 54	1 & 1A	Wasdells Falls gen. sta.	Pole No. 183, W54 ...	40	120	3.94	183	22,000
51 x 56	1	Pole No. 832, W51.....	Pole No. 1011, W56...	40	120	3.93	178	22,000
52 x 57	3	Pole No. 1203, W52....	Pole No. 1408, W57...	40	120	4.47	205	22,000
7 x 761	.....	Greenbank dist. sta....	Jct. W761.....	30	160	1.75	76	4,000

Lines terminating								
2 x 202	4	Beaverton dist. sta....	Gamebridge.....	.....	.....	5.81	.....	4,000
202 x 3	5	Gamebridge.....	Brechin.....	.....	.....	3.93	.....	4,000
3 x 302	6	Cannington dist. sta. .	Woodville.....	30	120	5.15	148	4,000
3 x 303	7	Cannington dist. sta. .	Sunderland.....	30	120	7.40	335	4,000
6 x 602	.....	Kirkfield dist. sta....	Kirkfield.....	.....	.....	1.01	.....	4,000
761 x 1	.....	Jct. W761.....	Uxbridge.....	30	160	5.75	208	4,000
761 x 2	.....	Jct. W761.....	Port Perry.....	30	160	4.00	139	4,000

NOTE.—W3 x 7. This line carried on W3 x 303 poles from Cannington dist. sta. to Pole No. 39.

DESCRIPTION

MUSKOKA SYSTEM								
New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age

Lines terminating								
M.	M.L.							
1 x 2	1	South Falls gen. sta....	Huntsville dist. sta....	35	132	26.32	1,141	22,000

OF LINES

SYMBOL "W"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at stations						
1	1/4" galv. steel	10 B.&S.G. c.c. steel	1/4" galv. steel	C.P. 136	Mar. 30, 1914	Sept. 28, 1914
1	1/4" galv. steel	10 B.&S.G. c.c. steel	1/4" galv. steel	C.P. 136	Feb. 18, 1914	Sept. 28, 1914
1	1/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 136	Feb. 17, 1916	June 4, 1916
1	2 B.&S.G.S.R. alum.	6 B.&S.G.S.R. alum.	9/32" galv. steel	O.B. 12546	Feb. 10, 1920	April 22, 1920
		9 B.W.G. galv. iron				
1	5/16" galv. steel	6 B.W.G. galv. iron	None	C.P. 133	June 21, 1922	Sept. 29, 1922

at junctions

1	1/0 B.&S.G.S.R.alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	{ C.P. 136 C.P. 133 C.P. 136	Jan. 17, 1914	Sept. 28, 1914
1	1/0 B.&S.G.S.R.alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	{ C.P. 133 C.P. 136 C.P. 136	Jan. 17, 1914	Sept. 28, 1914
1	1/4" galv. steel	10 B.&S.G. c.c. steel	1/4" galv. steel	{ C.P. 136 C.P. 136 C.P. 136	Feb. 18, 1914	Sept. 28, 1914
2	{ 1/0 B.&S.G. alum. 1/0 B.&S.G.S.R.alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	{ C.P. 133 C.P. 133 C.P. 136	Jan. 17, 1914	Sept. 28, 1914
1	1/0 B.&S.G.S.R.alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	{ C.P. 133 C.P. 133 C.P. 136	Jan. 17, 1914	Sept. 28, 1914
1	2 B.&S.G.S.R. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	C.P. 136	Feb. 18, 1914	Sept. 28, 1914
1	2/0 B.&S.G.S.R.alum.	None	1/4" galv. steel	C.P. 505	June 21, 1922	Sept. 29, 1922

at customers

1	1/0 B.&S.G. alum.	None	None	P. 2822	May 2, 1914	Oct. 6, 1914
1	1/0 B.&S.G. alum.	None	None	P. 2822	July 25, 1914	Oct. 6, 1914
1	1/0 B.&S.G. alum.	None	1/4" galv. steel	P. 2822	May 19, 1914	Oct. 19, 1914
1	1/0 B.&S.G. alum.	None	1/4" galv. steel	P. 2822	June 1, 1914	Oct. 19, 1914
1	2 B.&S.G.S.R. alum.	None	None	C.P. 505	April 19, 1920	June 18, 1920
1	2 B.&S.G.S.R. alum.	None	1/4" galv. steel	C.P. 105	June 21, 1922	Sept. 29, 1922
1	2 B.&S.G.S.R. alum.	None	1/4" galv. steel	C.P. 105	June 21, 1922	Sept. 29, 1922

OF LINES

SYMBOL "M"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at stations						
1	2 B.&S.G.S.R. alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 12547	Aug. 6, 1915	Aug. 15, 1916

DESCRIPTION

ST. LAWRENCE SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age
Lines terminating								
L.	St. L.							
1462 x 2	.....	Jct. L1462.....	Avonmore.....					
1463 x 3	.....	Jct. L1463.....	Maxville.....	45	325	5.17	94	4,000
6 x 601	.....	Toronto Paper Co. dist. sta.....	Howard Smith Paper Mills.....					550
7 x 701	6	Morrisburg met. sta....	Williamsburg.....			6.57		4,000
13 x 1302	.....	Martintown dist. sta....	Lancaster.....	30	160	11.59	399	4,000
72 x 22	.....	Pole No. 564, L72.....	Eugene Phillips Co....	40	175	2.60	67	44,000
Lines terminating								
11 x 1	.....	Mille Roche.....	Cornwall trans. sta....					
52 x 2	1A	Pole No. 363½ at Iroquois, L52	Prescott dist. sta.....	40	120	15.33	721	44,000
2 x 3	5	Prescott dist. sta.....	Brockville dist. sta....	40	120	14.08	630	44,000
7 x 4	2	Williamsburg dist. sta..	Winchester dist. sta....	40	120	9.78	449	26,400
4 x 5	3	Winchester dist. sta....	Chesterville dist. sta..	40	120	6.71	303	26,400
68 x 6	12	Pole No. 85, L68.....	Toronto Paper Co. dist. sta.....	40	176	0.11	5	46,000
54 x 7	2	Pole No. 94, L54.....	Williamsburg dist. sta..	40	120	4.61	204	26,400
66 x 13	.....	Pole No. 143, L66.....	Martintown dist. sta..	45	325	5.55	88	44,000
13 x 14	.....	Martintown dist. sta....	Apple Hill dist. sta....	45	325	5.36	91	44,000
67 x 15	.....	Pole No. 349, L67.....	Alexandria dist. sta....	45	325	8.91	161	44,000
68 x 18	.....	Pole No. 85, L68.....	Cornwall P. & P. Co..	50	132	1.66	73	44,000
Lines terminating								
1 x 51	8	Cornwall trans. sta....	Pole No. 391, L51....	40	176	12.63	391	46,000
53 x 52	1A	Pole No. 1, L53.....	Pole No. 363½, L52..	40	120	7.63	363	44,000
54 x 53	2	Pole No. 94, L54.....	Pole No. 1, L53.....	40	120	1.96	94	26,400
51 x 54	8	Pole No. 391, L51.....	Pole No. 94, L54.....	40	176	12.76	340	46,000
14 x 1462	.....	Apple Hill dist. sta....	Pole No. 18, L1462...	30	.....	1.04	18	4,000
1462 x 63	.....	Pole No. 18, L1462....	Pole No. 26, L1463...	30	.....	0.58	8	4,000
1 x 66	.....	Cornwall trans. sta....	Pole No. 143, L66....	45	325	8.12	143	44,000
14 x 67	.....	Apple Hill dist. sta....	Pole No. 349, L67....	45	325	1.62	27	44,000
1 x 68	12	Cornwall trans. sta....	Pole No. 85, L68.....	40	176	2.46	85	46,000

NOTE.—L11 x 1, telephone line only.

L14 x 1462, carried on L14 x 67 poles.

L1462 x 63, carried on L14 x 67 poles.

OF LINES

SYMBOL "L"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at customers						
1	2 B.&S.G.S.R. alum.	None	5/16" galv. steel	C.P. 1725	Oct. 8, 1920	Feb. 22, 1921
1	6 B.&S.G. M.H.D. copper	None	None	C.P. 105 C.P. 105	Feb. 22, 1915	Mar. 20, 1915
1	2 B.&S.G.S.R. alum.	None	1/4" galv. steel	C.P. 105 C.P. 1159	Nov. 4, 1920	May 25, 1921
1	4/0 B.&S.G.S.R.al'm	3 x 12 galv. steel	None	C.P. 1725	Apr. 21, 1922	Sept. 30, 1922

at stations

1	3 0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2111	Oct. 29, 1912	Oct. 23, 1913
1	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 133	Oct. 16, 1914	April 4, 1915
1	5/16" galv. steel	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2111	June 4, 1912	Dec. 18, 1913
1	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2111	Sept. 6, 1913	Feb. 7, 1914
1	336,000 c.m.s.r.alum	9 B.W.G.galv.iron	9/32" galv. steel	C.P. 1159 J.D. 2 units J.D. 3 units	Sept. 24, 1918	June 19, 1919
1	5/16" galv. steel	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2111	June 4, 1912	Dec. 18, 1913
1	2 B.&S.G.S.R. alum.	3 x 12 galv. steel	9/32" galv. steel	J.D. 2 units J.D. 3 units	June 4, 1920	Jan. 18, 1921
1	2 B.&S.G.S.R. alum.	3 x 12 galv. steel	9/32" galv. steel	J.D. 2 units J.D. 3 units	July 15, 1920	Jan. 18, 1921
1	2 B.&S.G.S.R. alum.	3 x 12 galv. steel	9/32" galv. steel	J.D. 2 units J.D. 3 units	Aug. 12, 1920	Jan. 18, 1921
1	6/0 B.&S.G.S.R.al'm	6 B.&S.G.S.R. al'm	9/32" galv. steel	C.P. 1159 J.D. 2 units J.D. 3 units	Jan. 13, 1921	May 26, 1921

at junctions

1	3/0 B.&S.G. alum.	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 1159 J.D. 2 units J.D. 3 units	May 7, 1918	April 30, 1919
1	3/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2111	Oct. 29, 1912	Oct. 23, 1913
1	5/16" galv. steel	10 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2111	June 4, 1912	Dec. 18, 1913
1	3/0 B.&S.G. alum.	9 B.W.G.galv.iron	9/32" galv. steel	C.P. 1159 J.D. 2 units J.D. 3 units	May 7, 1918	April 30, 1919
1	2 B.&S.G.S.R. alum.	None	None	C.P. 105	Jan. 15, 1921	Feb. 22, 1921
1	2 B.&S.G.S.R. alum.	None	None	C.P. 105	Jan. 30, 1921	Feb. 22, 1921
1	2 B.&S.G.S.R. alum.	3 x 12 galv. steel	9/32" galv. steel	J.D. 2 units J.D. 3 units	June 2, 1920	Jan. 18, 1921
1	2 B.&S.G.S.R. alum.	3 x 12 galv. steel	9/32" galv. steel	J.D. 2 units J.D. 3 units	Aug. 11, 1920	Jan. 18, 1921
1	336,000 c.m.s.r.alum	9 B.W.G.galv.iron	9/32" galv. steel	C.P. 1159 J.D. 2 units J.D. 3 units	Sept. 24, 1918	June 19, 1919

DESCRIPTION

RIDEAU SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
H. 8 x 2	R.L. 1	Balderson dist. sta....	Perth dist. sta.....	35	132	4.95	201	26,400
55 x 3	2	Pole No. 1328, H55....	Smith's Falls dist. sta..	35	132	5.64	233	26,400
55 x 5	4	Pole No. 1328, H55....	Carleton Place dist. sta	30	150	14.24	523	26,400
3 x 7	3	Smith's Falls dist. sta..	Merrickville dist. sta..	35	132	12.30	517	26,400
1 x 8	1	High Falls gen. sta....	Balderson dist. sta....	35	132	16.08	666	26,400
7 x 9	.....	Merrickville dist. sta..	Kemptville dist. sta....	35	250	12.13	257	26,400
2 x 55	2	Perth dist. sta.....	Pole No. 1328, H55....	35	132	11.31	459	26,400
8 x 801	.....	Balderson dist. sta....	Lanark.....	30	160	4.97	171	2,300

DESCRIPTION

THUNDER BAY SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
P. 2(T)x231	Port Arthur (temp.)..	Port Arthur sub.....	45	125	5.04	.....	22,000
1 x 50	Nipigon gen. sta.....	Sprucewood.....	45	330	17.33	284	110,000
50 x 51	Sprucewood jct.....	Everard switch.....	.....	.....	1.90	29	110,000
51 x 55	Everard.....	Hurkett switch.....	45	330	6.49	114	110,000
55 x 52	Hurkett.....	Pearl switch.....	.....	.....	15.73	240	110,000
52 x 53	Pearl.....	Sibley switch.....	45	330	13.82	209	110,000
53 x 54	Sibley.....	Bear Point jct.....	45	330	14.74	277	110,000
54x2(T)	Bear Point jct.....	Pt. Arthur (temp.) trans. sta.	45	330	0.35	7	110,000
1 x 56	Nipigon gen. sta.....	Nipigon jct.....	R/W	cleared	and tele	phone line	
56 x 50	Nipigon jct.....	Sprucewood jct.....	45	330	6.43	106	110,000
56 x 6	Nipigon jct.....	Nipigon Fibre & P. Co.	45	330	0.25	5	110,000
231 x 261	Port Arthur dist. sta..	Lyon Ave. jct.....	45	125	2.18	.....	22,000
261x2(P)	Lyon Ave. jct.....	Port Arthur trans. sta.	45	125	1.64	.....	22,000
2(P)x301	Port Arthur trans. sta.	Kaministiquia Power Co. jct.....	45	125	0.70	.....	22,000

NOTE.—For operating purposes, section P50 x P6 have been grouped and are known as P50 x 6.
For operating purposes, section P50 x P2 (temporary station) have been grouped and
Circuits in the section 2(T) x 231 are owned by the Municipality of Port Arthur.

OF LINES

SYMBOL "H"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
1	125,000 c.m. S.R. alum.	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 889	Aug. 22, 1918	June 23, 1919
1	125,000 c.m. S.R. alum.	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 889	April 12, 1918	Feb. 18, 1919
1	125,000 c.m. S.R. alum.	9 B.W.G. galv. iron	9/32" galv. steel	{C.P. 889 O.B. 11622 C.P. 889	May 7, 1919	May 31, 1920
1	5/16" galv. steel	9 B.W.G. galv. iron	1/4" galv. steel		Nov. 27, 1917	Sept. 5, 1918
1	125,000 c.m. S.R. alum.	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 889	Aug. 22, 1918	June 23, 1919
1	3 x 12 galv. steel	3 x 12 galv. steel	.....	O.B. 9410	July 26, 1921	Nov. 28, 1921
1	125,000 c.m. S.R. alum.	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 889	April 12, 1918	Feb. 18, 1919
1	2 B.&S.G.S.R. alum.	None	None	C.P. 105	July 26, 1921	Sept. 29, 1921

OF LINES

SYMBOL "P"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
2	4/0 B.&S.G.S.R.alum.	No. 10 copper	1/4" galv. steel	C.P. 889	Prop. of Port	Arthur 1920
1	4/0 B.&S.G.S.R.alum.	3 x 13 galv. steel	9/32" galv. steel	C.P. 2133	Dec. 17, 1919	Dec. 20, 1920
1	4/0 B.&S.G.S.R.alum.	3 x 13 galv. steel	9/32" galv. steel	C.P. 2133	Dec. 17, 1919	Dec. 20, 1920
1	4/0 B.&S.G.S.R.alum.	3 x 13 galv. steel	9/32" galv. steel	O.B. 12464	Mar. 1, 1919	Dec. 20, 1920
1	4/0 B.&S.G.S.R.alum.	3 x 13 galv. steel	9/32" galv. steel	O.B. 12464	Mar. 1, 1919	Dec. 20, 1920
1	4/0 B.&S.G.S.R.alum.	3 x 13 galv. steel	9/32" galv. steel	C.P. 2133	Oct. 27, 1919	Dec. 20, 1920
1	4/0 B.&S.G.S.R.alum.	3 x 13 galv. steel	9/32" galv. steel	C.P. 2133	May 3, 1919	Dec. 20, 1920
1	4/0 B.&S.G.S.R.alum.	3 x 13 galv. steel	9/32" galv. steel	C.P. 2133	Nov. 4, 1920	Dec. 20, 1920
instal	led only					
1	4/0 B.&S.G.S.R.alum.	3 x 12 galv. steel	9/32" galv. steel	C.P. 2133	Nov. 20, 1920	April 29, 1921
1	4/0 B.&S.G.S.R.alum.	3 x 12 galv. steel	9/32" galv. steel	C.P. 2133	Mar. 9, 1921	April 29, 1921
Ind. poles	{205,500 c.m. alum... 3/0 B.&S.G. alum. 205,500 c.m. alum... 3/0 B.&S.G. alum. 205,500 c.m. alum. 3/0 B.&S.G. alum.	10 B.&S.G. copper	1/4" galv. steel	O.B. 9410	.....	1910
2		10 B.&S.G. copper	1/4" galv. steel	O.B. 9410	.....	1910 restrung
2					.....	1914
2		10 B.&S.G. copper	1/4" galv. steel	O.B. 9410	.....	1910 restrung
						1917

are known as P50 x 2(T).

DESCRIPTION

CENTRAL ONTARIO AND TRENT SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt- age
Lines ending								
C.								
2 x 3*	.....	Sydney gen. sta.....	Sydney terminal sta....	.....	.....	.....	None	6,600
5 x 3	62 & 63	Frankford gen. sta.....	Sydney terminal sta....	35	100	4.70	240	6,600
53 x 3	R	Wooler pole, C53.....	Sydney terminal.....	40	176	6.53	207	44,000
96 x 6	H	Picton jct., C96.....	Brighton trans. sta....	35	132	7.30	307	44,000
6 x 7	H	Brighton trans. sta....	Colborne trans. sta....	35	132	10.10	366	44,000
12 x 11	12	Campbellford mun.sta.	Seymour gen. sta.....	30	132	1.20	50	2,400
	Tie line							
7 x 13	H	Colborne trans. sta....	Cobourg trans. sta....	35	132	13.80	644	44,000
13 x 16	H	Cobourg trans. sta....	Port Hope trans. sta..	35	132	6.70	256	44,000
17 x 18*	20	Peterboro hydraulic ..	Auburn gen. sta.....	.....	.....	.....	.....	2,400
18 x 19	80 & 81	Auburn gen. sta.....	Auburn trans. sta....	Under ground	Cables	200 ft.	6,600	
31 x 19	Y	Norwood trans. sta....	Auburn trans. sta....	40	300	17.89*	301	44,000
79 x 19	K	Lindsay jct., C79.....	Auburn trans. sta....	35	132	8.70	384	44,000
18 x 20	83, 84 & 85	Auburn gen. sta.....	Peterboro trans. sta..	30-50	100	2.00	105	6,600
66 x 22	C	Port Hope sw. sta.....	Newcastle trans. sta..	35	132	15.60	717	44,000
22 x 23	C	Newcastle trans. sta....	Bowmanville trans.sta.	35	132	4.50	206	44,000
				40	150	1.20	40	44,000
23 x 24	C	Bowmanville trans. sta.	Oshawa trans. sta....	35	132	9.70	437	44,000
75 x 25	Millb'k Tap	Millbrook jct., C75....	Millbrook trans. sta....	35	132	1.70	71	44,000
76 x 29	L	Omemee sw. tower.....	Lindsay trans. sta....	35	132	13.20	559	44,000
30 x 29	100 & 101	Fenelon Falls gen. sta.	Lindsay trans..sta....	30	100	13.00	725	11,000
14 x 31	Y	Healey Falls gen. sta..	Norwood trans. sta....	40	300	10.44	174	44,000
47 x 32	.....	Marmora trans. sta....	Deloro trans. sta.....	35	132	4.10	182	44,000
83 x 33	Madoc Tap	Madoc jct., C83.....	Madoc trans. sta.....	35	132	9.60	437	44,000
83 x 34	A	Madoc jct., C83.....	Sulphide trans. sta....	35	132	20.30	862	44,000
85 x 35	Stirling Tap	Stirling jct., C85.....	Stirling trans. sta....	35	132	0.20	8	44,000
86 x 36	Pulp M. Tap	Pulp Mill jct., C86....	{Campbellford Pulp Mill trans. sta.....	35	132	1.40	55	44,000
87 x 37	64 & 65	Brit. Chem. Co. jct.C87	Trenton trans. sta. ...	30	132	.....	20	6,600
88 x 38	B'ville Tap	Belleville sw. sta.....	Belleville trans. sta. ...	35	132	1.30	41	44,000
90 x 39	B.P.Co. Tap	Belleville Chem. Co. jct., C90.	Belleville Cement Co. sta.	35	132	1.00	55	44,000
90 x 40	Quarry Tap	Belleville Cement Co. jct., C90	Pt. Anne Quarries sta.	35	132	0.90	49	44,000
91 x 41	E & F	Lehigh jct., C91.....	Lehigh Cem. Co. trans. sta.....	35	132	0.60	33	44,000
92 x 42	J	Deseronto jct., C92....	Deseronto trans. sta. .	35	132	2.80	115	44,000
92 x 43	J	Deseronto jct., C92....	Napanee trans. sta....	35	132	6.00	246	44,000
43 x 44	J	Napanee trans. sta....	Kingston trans. sta. .	40	175	26.50	863	44,000
96 x 45	Picton Tap	Picton jct., C96.....	Wellington trans. sta..	40	176	17.45	511	44,000
45 x 46	Picton Tap	Wellington trans. sta....	Picton trans. sta.....	40	176	10.80	331	44,000
82 x 47	Deloro Tap	Deloro Jct., C82.....	Marmora trans. sta....	35	132	10.40	464	44,000

NOTE.—*C2 x 3, underground cables only.

*C17 x 18, carried on C18 x 20 poles.

OF LINES

SYMBOL "C"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at transformers or generating stations						
2	.....	Style "B" .....	.....	.....	.....	1911
3	300,000 c.m. alum.	9 B.W.G. galv. iron	5/16" galv. steel	Locke 298	.....	1912
1	2/0 B.&S.G. copper	10 B.&S.G. c.c. steel	1/4" galv. steel	O.B. 11623	.....	1918
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ C.P. 1159	.....	1911
				{ O.B. 11623	.....
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1911
3	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	.....	.....	.....	1910
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1911
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1911
1	1 B.&S.G. copper	.....	.....	.....	.....	1902
2	.....	.....	.....	.....	.....	Rebuilt 1918
1	4/0 B.&S.G.S.R.alum.	3 x 13 galv. steel	9/32" galv. steel	C.P. 1725	{ 2-susp.	1920
					{ 3-strain.	
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1912
3	{ 2/0 B.&S.G.cop. 1-cir.	.....	.....	.....	.....	1902
	{ 1 B.&S.G. cop. 2-cir.	.....	.....	.....	.....	Rebuilt 1918
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron.	5/16" galv. steel	C.P. 1159	.....	1911
1	4/0 B.&S.G.S.R.alum.	9 B.W.G. galv. iron.	5/16" galv. steel	C.P. 1159	.....	1911
2	4/0 B.&S.G.S.R.alum.	9 B.W.G. galv. iron.	5/16" galv. steel	C.P. 1159	.....	1911
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron.	5/16" galv. steel	C.P. 1159	.....	1911
1	6 B.W.G. galv. iron.	9 B.W.G. galv. iron	5/16" galv. steel	O.B. 10638	.....	1912
1	2/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1912
2	4 B.&S.G. copper	9 B.W.G. galv. iron	barbed wire	.....	.....	1899
1	4/0 B.&S.G.S.R.alum.	3 x 13 galv. steel	9/32" galv. steel	C.P. 1725	{ 2-susp.	1920
					{ 3-strain.	
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1909
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1910
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	O.B. 25529	.....	1910
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ 362 Locke	.....	1910
				{ Retested	.....
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ 362 Locke	.....	1911
				{ Retested	.....
2	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	.....	.....	.....	1911
	4/0 B.&S.G. alum. }	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	Rebuilt 1917
	2 B.&S.G. alum. }	.....	.....	.....	.....	1910
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1911
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1911
2	2 B.&S.G.S.R. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	.....
1	1/4" x 5/16" galv. steel	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1912
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1912
1	1/0 B.&S.G. copper	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 1725	.....	1917
1	9/32" galv. steel	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 1159	.....	1919
1	9/32" galv. steel	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 1159	.....	1919
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1909

DESCRIPTION

CENTRAL ONTARIO AND TRENT SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt- age
Lines ending								
C. 86 x 52	G	Pulp Mill jct. C86.....	G.B. jct., C52.....	35	132	14.20	641	44,000
64 x 53	R	Meyersburg pole, C64..	Wooler pole, C53.....	40	176	13.17	412	44,000
14 x 61	O	Healey Falls.....	Campbellford jct., C61.	35	132	3.60	169	44,000
14 x 64	R	Healey Falls.....	Meyersburg, pole C64	35	176	10.82	356*	44,000
16 x 66	H	Port Hope.....	Port Hope sw. sta.....	35	132	0.20	7	44,000
66 x 75	K	Port Hope sw. sta.....	Millbrook jct., C75...	35	132	15.50	663	44,000
79 x 76	L	Lindsay jct., C79.....	Omeme sw. tower C76	35	132	6.00	253	44,000
75 x 79	K	Millbrook jct., C75....	Lindsay jct., C79.....	35	132	10.70	447	44,000
11 x 82	A	Seymour gen. sta.....	Deloro sw. sta., C82..	35	132	5.50	244	44,000
84 x 83	A	Harold jct., C84.....	Madoc jct., C83.....	35	132	5.10	212	44,000
82 x 84	A	Deloro jct., C82.....	Harold jct., C84.....	35	132	4.50	182	44,000
85 x 84	Q	Stirling jct., C85.....	Harold jct., C84.....	35	132	8.30	308	44,000
52 x 85	Q	G. B. jct., C52.....	Stirling jct., C85.....	35	132	1.10	46	44,000
11 x 86	G	Seymour gen. sta.....	Pulp Mill jct., C86...	35	132	1.20	57	44,000
3 x 87	64 & 65	Sidney terminal sta....	Br. Chem. Co., jct. C87	30	132	0.70	28	6,600
3 x 88	M	Sidney terminal sta....	Belleville sw. sta.....	35	132	12.70	516	44,000
52 x 88	B	G.B. jct., C52.....	Belleville sw. stn.....	35	132	13.00	568	44,000
88 x 90	E & F	Belleville sw. sta.....	Belleville Cem. Co., jct., C90.....	35	132	4.80	246	44,000
90 x 91	E & F	Belleville Cem. Co. jct. C90	Lehigh jct., C91.....	35	132	1.00	51	44,000
91 x 92	J	Lehigh jct., C91.....	Deseronto jct., C92...	35	132	11.20	552	44,000
3 x 96	H	Sidney terminal sta....	Picton jct., C96.....	35	132	4.70	203	44,000

OF LINES

YMBOL "C"—Continued

No. of cir- cuits	Size and material of power cable	Size and material of telephone wire	Size and ma- terial of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at switching stations or junctions						
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ 362 Locke Retested	.....	1911
1	2/0 B.&S.G. copper	10 B.&S.G.c.c. steel	1/4" galv. steel	{ O.B. 11623	.....	1918
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ 362 Locke Retested	.....	1912
1	2/0 B.&S.G. copper	10 B.&S.G. c.c. steel	1/4" galv. steel	{ O.B. 11623	.....	1918
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ C.P. 1159	.....	1911
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ Pole 1-600 362 Locke	.....	1912
1	2/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ C.P. 1159	.....	.....
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ P.600-630 362 Locke	.....	1912
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ 362 Locke Retested	.....	1909
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ 25529 O.B. 1159 C.P.	.....	1910
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ 362 Locke Retested	.....	1909
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ 362 Locke Retested	.....	1910
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ 362 Locke Retested	.....	1910
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ 362 Locke Retested	.....	1911
2	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	.....	.....	.....	1911
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ C.P. 1159 C.P. 1159	.....	Rebuilt 1917 1911
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ O.B. 11623	.....	1910
2	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ C.P. 1159 O.B. 12855	.....	1911
2	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ C.P. 1159	.....	1911
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ C.P. 1159	.....	1912
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{ O.B. 11623	.....	1911

DESCRIPTION

CENTRAL ONTARIO AND TRENT SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt- age
Lines ending								
87 x 301	.....	Br. Chem. Co. jct., C87	Br. Chem. Co. Trenton	30	132	0.10	6	6,600
5 x 501	70	Frankford gen. sta.....	Companies at Frankf'd	30	132	2.00	85	6,600
11 x 1101	.....	Seymour gen. sta.....	Co.s at Campbellford.	30	132	1.25	50	2,400
11 x 1106	72	Seymour gen. sta.....	Hoard's.....	30	150	12.00	.....	6,600
†18x1801	82	Auburn gen. sta.....	Auburn Woollen Mills	30	132	0.10	5	6,600
22 x 2201	.....	Newcastle trans. sta....	Newcastle.....	35	132	1.00	40	2,400
2201 x 2	Orono	Newcastle.....	Orono.....	30	132	5.00	210	2,400
24 x 2402	Whitby	Oshawa trans. sta.	Whitby.....	30	132	4.00	175	4,160
†30x3001	.....	Fenelon Falls gen. sta..	Fenelon Falls.		550			
†33x3302	.....	Madoc trans. sta.	Can. Sulphur Ore.....					
3363 x 3	.....	Cross & Wellington jct.,	Cross & Wellington...	30	132	1.50	60	4,160
		C3363						
3363 x 4	.....	Cross & Wellington jct.,	Can. Indust. Minerals	30	132	2.50	100	4,160
		C3363						
3365 x 5	.....	Gillespie Talc Mine jct.,	Gillespie Talc Mines..	30	132	0.10	3	4,160
		C3365						
3365 x 6	.....	Gillespie Talc Mine jct.,	Anglo-American Talc .	30	132	0.20	8	4,160
		C3365						
33 x 3307	.....	Madoc trans. sta.	Gillespie Talc Mill....	30	132	1.00	40	4,160
33 x 3363	.....	Madoc trans. sta.	Cross & Wellington jct.	30	132	0.80	32	4,160
			C3363					
3363 x 65	.....	Cross & Wellington jct.,	Gillespie Talc Mine jct.	30	132	1.25	50	4,160
		C3363	C3365					
34 x 3402	.....	Sulphide trans. sta.	Tweed.....	30	132	6.00	240	4,160
43 x 4302	New- burgh	Napanee trans. sta.	Newburgh.....	30	132	7.92	328	4,160
†45x4502	B'field	Wellington trans. sta..	Bloomfield.....			6.53	.....	4,160
14 x 1401	73	Healey Falls power hse.	Ontario Rock Co.....	30	150	6.01	222	6,600
18 x 1832	82	Auburn gen. sta.....	Lakefield trans. sta. ..	30	150	7.92	290	6,600
26 x 2601	.....	Omemee trans. sta.	Omemee.....	30	132	1.00	40	4,160
31 x 3102	.....	Norwood trans. sta.	Havelock.....	30	150	6.62	259	4,000
10 x 60	.....	Ranney Falls power hse.	Pole No. 249, R. line .	40	125	0.38	15	44,000

* And 2 towers.

NOTE.—† C18 x 1801 carried on C18 x 1832 poles.
C45 x 4502 carried on C45 x 46 poles.
C30 x 3001—1 span only, crossing river.
C33 x 3302—This line has been dismantled.

NIPISSING SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt- age
Z.								
1 x 101	Nipissing gen. sta.....	Nipissing village.....	28	126	2.50	128	2,200
1 x 52	Nipissing gen. sta.....	Powassan tap, Z52....	34	126	3.00	137	22,000
52 x 2	Powassan, Z52.....	Powassan dist. sta....	32	126	4.00	184	22,000
52 x 3	Powassan, Z52.....	Callendar dist. sta....	34	126	7.00	318	22,000
3 x 4	Callendar dist. sta....	North Bay dist. sta...	35	126	8.20	401	22,000

OF LINES

SYMBOL "C"—Continued

No. of cir- cuits	Size and material of power cable	Size and material of telephone wire	Size and ma- terial of groundst cable	Make and yle of power insulators	Date work began	Date placed in operation
at customers and junctions						
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	.....	.....	.....	1917
1	6 B.&S.G. copper	.....	.....	.....	.....	1914
1	2 B.&S.G. alum.	.....	.....	.....	.....	.....
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	9/32" galv. steel	.....	.....	1912
1	2 B.&S.G. alum.	.....	.....	Locke 298	.....	1912
1	9/32" galv. steel	.....	.....	.....	.....	Rebuilt 1918
1	4 B.&S.G.W.P. cop'r	.....	.....	.....	.....	1911
1	2 B.&S.G. alum.	.....	.....	.....	.....	1912
1	4/0 B.&S.G. alum.	.....	5/16" galv. steel	.....	.....	1912
1	4/0 B.&S.G. alum.	.....	.....	.....	.....	1914
1	1 B.&S.G. std. copper	.....	5/16" galv. steel	.....	.....	.....
1	1 B.&S.G. std. copper	.....	5/16" galv. steel	.....	.....	1912
1	2 B.&S.G. alum.	.....	5/16" galv. steel	.....	.....	1914
1	6 B.&S.G. copper	.....	5/16" galv. steel	.....	.....	1916
1	2 B.&S.G. alum.	.....	.....	.....	.....	1914
1	2/0 B.&S.G. copper	.....	5 16" galv. steel	.....	.....	1911
1	2 B.&S.G. alum.	.....	5/16" galv. steel	.....	.....	.....
1	2/0 B.&S.G. alum.	9 B.W.G. galv iron	9/32" galv. steel	.....	.....	1912
2	2 B.&S.G. solid copp'r	.....	6 B.W.G. galv. iron	.....	.....	1917
1	2 B.&S.G.S.R. alum.	.....	.....	C.P. 105B	.....	1919
1	2 B.&S.G.S.R. alum.	.....	9/32" galv. steel	T. 2041	.....	1920
1	2 B.&S.G.S.R. alum.	.....	9/32" galv. steel	T. 2041	.....	1920
1	6 B.&S.G.W.P cop'r	.....	9/32" galv. steel	.....	.....	1917
1	2 B.&S.G.S.R. alum.	.....	4x12 galv. steel	C.P. 505	.....	1921
2	4/0 B.&S.G.S.R. al'm	10 B.&S.G.c.c. steel	None	{C.P. 1159 C.P. 1725	.....	Aug, 1922

SYMBOL "Z"

October 31, 1922

No. of cir- cuits	Size and material of power cable	Size and material of telephone wire	Size and ma- terial of ground cable	Make and style of power insulators	Date work began	Date placed in operation
1	6 B.&S.G.W.P. cop'r	None	None	Similar to O.B. 9410	1911	1911
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5 16" galv. steel	do.	Aug., 1909	Mar., 1910
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5 16" galv. steel	do.	Nov., 1911	Dec., 1911
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5 16" galv. steel	do.	Aug., 1909	Mar., 1910
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5 16" galv. steel	do.	Aug., 1909	Mar., 1910

RURAL AND MUNICIPAL DISTRIBUTION SYSTEMS

Below is shown in tabular form the work carried on under the supervision of the Distribution section of the Electrical Engineering and Laboratory department, during the year ended October 31, 1922.

Briefly this covers the installation of 442 miles of rural lines and 42 miles of 4,000-2,300-volt feeders to supply urban municipalities and, in connection therewith, a number of outdoor metering equipments. Distribution systems were constructed for two municipalities and some work done on two other municipal systems.

Estimates were made in connection with the above and for other proposed work, the total number of estimates being 314 and the total estimated cost \$2,509,924.

The above construction work necessitated the preparation of 97 plans for circuits crossing railways.

RURAL DISTRIBUTION SYSTEMS CONSTRUCTED

District	Mile- age	Volt- age	No. of con- sumers	Date work was commenced	Date work was made alive	Date work was completed
NIAGARA SYSTEM						
Niagara.....N1D1.....	3.5 <i>b</i>	4,000	23	Oct. 25, 1921	Jan. 18, 1922	Jan. 18, 1922
Jordan.....N1D3.....	1.5	2,300	24	April 22, 1922	May 15, 1922	May 27, 1922
Jordan.....N1D3.....	16.45	4,000	23	Sept. 15, 1922	.....	.....<i>a</i>
Beamsville.....N1D4.....	40.2 <i>c</i>	4,000	171	Aug. 28, 1922	.....	.....<i>a</i>
Welland.....N1D5.....	6.5	2,300	38	Jan. 23, 1922	April 13, 1922	April 20, 1922
Stamford.....N1D6.....	6.5	4,000	89	Dec. 23, 1921	Mar. 30, 1922	May 20, 1922
Chippawa.....N1D7.....	8.3 <i>b</i>	2,300	75	Dec. 8, 1921	July 11, 1922	July 11, 1922
Dundas.....N2D1.....	7.3 <i>b</i>	2,200	29	Nov. 16, 1921	April 4, 1922	April 4, 1922
Lynden.....N2D2.....	14.0 <i>b</i>	2,300	73	Dec. 1, 1921	Feb. 9, 1921	May 15, 1922
Waterdown.....N2D3.....	1.89	2,300	28	Sept. 1, 1922	Oct. 30, 1922	Oct. 30, 1922
Markham.....N3D1.....	7.75	4,000	78	Sept. 22, 1922	.....	.....<i>a</i>
Dorchester.....N4D1.....	30.1	4,000	206	Nov. 1, 1921	May 31, 1922	May 31, 1922
London.....N4D2.....	5.1	2,300	26	Oct. 9, 1922	.....	.....<i>a</i>
Delaware.....N4D3.....	10.35	4,000	54	Sept. 1, 1922	Oct. 30, 1922	.....<i>a</i>
Exeter.....N4D6.....	2.25	4,000	121 <i>d</i>	Sept. 29, 1922	.....	.....<i>a</i>
Galt.....N6D2.....	3.0	2,300	15	July 3, 1922	Sept. 12, 1922	Oct. 21, 1922
St. Jacobs.....N7D2.....	3.7	4,000	48	Sept. 15, 1922	.....	.....<i>a</i>
Woodstock.....N10D2.....	55.0	4,000	206	July 17, 1922	.....	.....<i>a</i>
Brant.....N12D1.....	18.1	4,000	83	Mar. 5, 1922	.....<i>e</i>	.....<i>a</i>
Drumbo.....N12D5.....	7.55	4,000	63	June 28, 1922	Aug. 15, 1922	Aug. 15, 1922
Chatham.....N14D1.....	24.08	4,000	85	Dec. 12, 1921	Oct. 20, 1922	Oct. 20, 1922
Ridgetown.....N14D2.....	27.6	4,000	142 <i>f</i>	Dec. 3, 1921	July 27, 1922	Aug. 8, 1922
Wallaceburg.....N14D13.....	15.1	2,300	60	Aug. 29, 1922	.....	.....<i>a</i>
Sandwich.....N15D1.....	5.7	2,300	37	June 29, 1922	July 24, 1922	Sept. 25, 1922
Belle River.....N15D2.....	14.5	4,000	98	Sept. 7, 1922	.....	.....<i>a</i>
Saltfleet.....N17D1.....	62.0 <i>c</i>	4,000	533	Oct. 25, 1921	April 17, 1922	July 7, 1922
Total.....	398.02	.....	2,428	.....	.....	.....

NOTE:—For subnotes *a*, *b*, *c*., etc., see end of table.

RURAL DISTRIBUTION SYSTEMS CONSTRUCTED—Continued

District	Mile- age	Volt- age	No. of con- sumers	Date work was commenced	Date work was made alive	Date work was completed
EUGENIA SYSTEM						
Flesherton.....E1D1....	1.56	2,300	17	Feb. 11, 1922	Feb. 23, 1922	Feb. 24, 1922
Walkerton Quarries..E26D1..	1.6	2,300	4	Jan. 31, 1922	Feb. 15, 1922	Feb. 15, 1922
Total.....	3.16	.....	21	.....	.....	.....

WASDELLS SYSTEM

Cannington.....W3D1....	1.25	2,300	3	Jan. 15, 1922	April 14, 1922	April 19, 1922
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ST. LAWRENCE SYSTEM

Prescott.....L2D1.....	15.2	2,300	60	Dec. 28, 1921	June 19, 1922	July 8, 1922
Brockville.....L3D1.....	1.4	2,300	10	June 19, 1922	Aug. 28, 1922	Aug. 28, 1922
Chesterville.....L5D1.....	3.9	2,300	10	April 1, 1922	May 4, 1922	May 7, 1922
Martintown.....L13D1.....	0.25	2,300	20	Dec. 28, 1921	Jan. 14, 1922	May 15, 1922
Total.....	20.75	.....	100	.....	.....	.....

OTTAWA SYSTEM

Nepean.....T1D1.....	18.61	4,000	75	Sept. 27, 1921	Feb. 23, 1922	April 11, 1922
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- a*, Not completed on October 31, 1922.
b, Underground construction.
c, Overhead and underground construction.
d, 49 street lights installed at Crediton and Centralia.
e, 13 miles made alive on October 31, 1922.
f, 50 street lights installed at Rondeau Park.

Summary

System	Mileage	Number of consumers
Niagara.....	398.02	2,428
Eugenia.....	3.16	21
Wasdells.....	1.25	3
St. Lawrence.....	20.75	100
Ottawa.....	18.61	75
Total.....	441.79	2,627

DISTRIBUTION FEEDERS CONSTRUCTED

Line	Mile- age	Volt- age	Phase	Date work was commenced	Date work was made alive	Date work was completed
NIAGARA SYSTEM						
Etobicoke Dist. Sta. to Good- year Tire & Rubber Co. N1631X10.....	0.13	4,000	3	April 19, 1922	April 21, 1922	April 21, 1922
Watford to Alvinston..... N1446X22.....	10.6	4,000	3	Nov. 23, 1921	Nov. 22, 1922	Mar. 29, 1922
Forest to Thedford..... N1445X24.....	11.5	4,000	3	April 10, 1922	May 18, 1922	May 27, 1922
Walkerville Dist. Sta. to River- side.....N1502X5.....	4.6 <i>b</i>	4,000	3	July 3, 1922	Aug. 3, 1922	Aug. 3, 1922
Riverside to Tecumseh..... N1505X6.....	2.2 <i>b</i>	4,000	3	July 3, 1922	Aug. 3, 1922	Aug. 3, 1922
Tecumseh to St. Clair Beach.. N1506X7.....	1.2 <i>b</i>	4,000	3	July 3, 1922	Aug. 3, 1922	Aug. 3, 1922
Belle River Sta. to Belle River N1538X8.....	0.14	4,000	3	Oct. 26, 1922		<i>a</i>
Fletcher to Merlin..... N1455X26.....	4.7	4,000	3	<i>c</i>		
Total.....	35.07					

WASDELLS SYSTEM

Greenbank Sub-sta. to Junction W761—W7X761.....	1.75	4,000	3	June 21, 1922	Sept. 29, 1922	Sept. 29, 1922
Junction W761 to Uxbridge... W761X1.....	5.75	4,000	3	June 21, 1922	Sept. 29, 1922	Sept. 29, 1922
Junction W761 to Port Perry W761X2.....	4.0	4,000	3	June 21, 1922	Sept. 29, 1922	Sept. 29, 1922
Total.....	11.50					

a, Not completed on October 31, 1922.

b, Carried on existing poles.

c, Actual construction not commenced on October 31, 1922.

Summary

System	Mileage
Niagara.....	35.07
Wasdells.....	11.50
Total.....	46.57

METERING STATIONS CONSTRUCTED

Station	Work completed	Measuring power for
Niagara System		
Brantford Sand and Gravel Co.	May 5, 1922	Brantford Sand and Gravel Company.
Chippawa	July 4, 1922	Chippawa Rural power district.
Chatham	Oct. 20, 1922	Chatham Rural power district.
Dorchester	May 5, 1922	Dorchester village.
Highgate	April 28, 1922	Highgate village.
Jordan	May 15, 1922	Jordan Rural power district.
Niagara	Jan. 18, 1922	Niagara Rural power district.
St. George	Sept. 7, 1922	St. George village.
Streetsville Lumber Company	Oct. 6, 1922	Streetsville Lumber Company.
Thamesville	May 20, 1922	The town of Thamesville.
Eugenia System		
Arthur	June 14, 1922	The town of Arthur.
Flesherton	Feb. 23, 1922	Flesherton Rural power district.
Tara	Dec. 5, 1921	The town of Tara.
Walkerton Quarries	Feb. 15, 1922	Walkerton Quarries Rural power district.
Wasdells System		
Uxbridge	Aug. 24, 1922	The town of Uxbridge.
Port Perry	Aug. 30, 1922	The town of Port Perry.
Ottawa System		
Nepean	Feb. 23, 1922	Nepean Rural power district.

MUNICIPAL DISTRIBUTION SYSTEMS CONSTRUCTED

Municipality	Date work was commenced	Date work was made alive	Date work was completed
Niagara System			
Alvinston	Nov. 23, 1921	Mar. 22, 1922	Mar. 29, 1922
Thedford	Mar. 28, 1922	May 18, 1922	May 27, 1922
Belle River	Sept. 8, 1922	.....	.....^a
Merlin . . . . .	.....^b	.....	.....

NOTES:—^a, Work not completed on October 31, 1922.

^b, Actual construction not commenced on October 31, 1922.



PLATE A

APPENDIX III

FLOW REGULATION OF THE TRENT AND OTONABEE RIVERS

During recent years the flow regulation of the Trent and Otonabee rivers and all matters relating thereto have aroused widespread interest. The municipalities and rural districts of the Central Ontario and Trent system, being entirely dependent upon the flow of these rivers for their supply of power, are vitally concerned. Some public organizations are so alive to the importance of the issues involved that they have requested the Hydro-Electric Power Commission to supply them with data from which to draw their own conclusions.

Officers of the Commission have, for some time, been making thorough studies of all questions relating to the economic utilization of these waters for the development of power, and have in preparation a report on this subject which it is hoped will help remove existing differences and lead to the adoption of certain methods of flow regulation for the more efficient development of power, without in any way being detrimental to the interests of navigation.

It appears desirable, therefore, to incorporate in the Fifteenth Annual Report a summary of facts appertaining to the regulation of flow and use of storage waters of the Trent and Otonabee rivers during the year 1922.

It may be added that in order to make the discussion clear and to convey the general information necessary for an intelligent understanding of the problems under review, it has been necessary to make plain and pointed statements; also, in order to show convincingly the necessity of changing certain methods of regulation, it has been necessary to discuss actual operating incidents in a manner which exposes the inadequacy of the methods employed. The subject has not been dealt with in any contentious spirit.

The foregoing explanation has been given in order that the purpose of the statements, discussion and suggestions herein presented will not be misinterpreted.

The Existing Power Developments

For many years the Trent and Otonabee rivers have been used for the development of power. The developments at present in existence, both private and public, are shown on the accompanying map, plate A, and for convenience of consideration may be divided into two natural groups: the upper group, situated on the Otonabee river—from which Rice lake derives its main supply—and the lower group, situated on the Trent river—depending for its water supply mainly upon the outflow from Rice lake.

This lower group comprises 73 per cent of the present total development on both rivers, and with the completion of dams Nos. 8 and 9 near Campbellford, the percentage will be increased to 77 per cent.

The chief interest of the Hydro-Electric Power Commission centres in this lower group, of which 82 per cent belongs to the province of Ontario and is operated by the Commission, and an additional 4 per cent is purchased under contract by the Commission, thus bringing the Commission's present interest

in this lower group to 86 per cent, with a prospective increase in the very near future to 89 per cent.

General Problems of Regulation

The Otonabee river is the chief source of water supply to Rice lake. Its flow is measured by means of a rated section at Nassau, four miles above Peterboro, and is regulated in accordance with instructions issued by officers of the Department of Railways and Canals, Ottawa, by means of a system of dams throughout the Kawartha lakes.

While the amount of water available for the power development below Rice lake depends in large measure upon the water supplied by the Otonabee river, nevertheless its distribution from day to day and week to week, and hence its economic usefulness, depends upon the flow regulation at Hastings—the outlet and point of control of Rice lake—and it may be added that the principal operating difficulties encountered during 1922 are attributable to the flow regulation of the Trent river at Hastings rather than to the regulation of the Otonabee river at Peterboro.

For the explanation of this fact we have not far to seek. Rice lake, whose large area of water surface intervenes between Hastings and Peterboro and whose elevation is controlled by means of a dam at Hastings, affords ample facilities for establishing a flow regulation at Hastings totally different from the regulation at Peterboro. These possibilities of flow modification afforded by Rice lake may be employed so as to yield results either beneficial or detrimental. No matter how perfect may be the regulation at Peterboro, Rice lake can be so controlled at Hastings as to give extremely unsatisfactory regulation. Hastings, then, is really the key point of flow control for the plants below Rice lake which, as has already been stated, comprise about three-quarters of the total development of both rivers. The correctness and significance of these statements will be manifest in the course of the following discussion.

The nature of the difficulties encountered in securing satisfactory regulation at Hastings may be enumerated under three principal headings:

- 1—The difficulty of determining the flow at Hastings.
- 2—The difficulty of ascertaining the mean elevation of Rice lake.
- 3—The difficulty of regulating Rice lake without proper facilities.

The Hastings Flow

1—Unfortunately a direct measurement of the flow at Hastings is practically out of the question. Four small, privately-owned power plants utilize a considerable portion of the summer flow, but the amount thus discharged is subject to abrupt and sometimes violent changes which, frequently, occur unnoticed at Hastings although the effect is at once apparent at Heely* falls. A large amount of water percolates through the banks of the power canals, which have many seams and fissures; also through leaky intake works and wheel settings of the small power plants. The flow which passes through the sluiceways can, of course, be determined, but as a rule this flow is a small portion of the total summer flow and is sometimes practically nil. Since the elevations above and

* The name "Heely Falls" has been variously spelled by different authorities, a common spelling being Healey Falls. While the Annual Report was in progress the question of the correct spelling was referred to the Geographic Board of Canada. Although the Board has not yet given its decision, yet the weight of authority appears to point to the spelling *Heely* and this spelling has consequently been adopted in this Appendix III which was the last Section prepared for this Annual Report.



PLATE B—GURLEY GRAPHIC WATER-STAGE REGISTER

This is the type of gauge used for measuring the elevation of Rice lake at Gore Landing and Keene

below Hastings are controlled by stop logs, they bear no relation to the flow and, consequently, a rated section of the ordinary type would be useless for flow measurement.

Rice Lake Elevations

2—Rice lake, which is controlled at Hastings, is a comparatively large body of water. Its area is nearly 31 square miles and, therefore, large variations in outflow or inflow, unless greatly prolonged, have but a small effect on its

mean elevation. Windage alone causes wide and often erratic fluctuations at any one gauge, making it necessary to maintain at least two gauges so placed that the effects of windage will, as nearly as possible, be equal and opposite so that the mean of the gauge indications will give the mean elevation of the lake. Since the permissible fluctuation of lake elevation is small, the gauges used must be precise. Furthermore, unless precise equipment to measure such changes is used, large quantities of power may needlessly be wasted, or what would be a still more serious matter, flow at Hastings necessary for power may be withheld and stored on Rice lake, without this fact being detected from readings of lake elevations.

Present Methods

3—Rice lake at present is actually regulated from readings on a staff gauge located at Hastings which is separated from the lake proper by a short section of the Trent river, and which, unfortunately, is the worst place at which a single gauge could be installed, on account of the severe effects at this point of windage and on account also of the gradient in the river section. With respect to gradient, it may be stated that at flood periods, the elevation of Rice lake proper is sometimes two feet above the elevation of the river section at Hastings, while at low stage this difference in elevation is reduced to a matter of inches.

It is perhaps worth noting here, that in this matter of regulation as at present carried out, the lockmaster can be given little or no satisfactory assistance. He may, of course, report conditions to the Department of Railways and Canals, Peterboro, and ask for instructions, but such instructions must of necessity be based upon his own reports; consequently the regulation really depends upon his judgment, which is formed upon an inadequate knowledge of the governing facts.

From the foregoing paragraphs it will be apparent that the lockmaster lacks the facilities for obtaining the basic information which must be considered in order to effect the best regulation. He cannot determine, with accuracy, the mean elevation of Rice lake proper, nor has he knowledge—other than such inaccurate surmises as may be made under the difficult conditions prevailing—of the actual total flow. Nevertheless, he is required to maintain the elevation of Rice lake within narrow limits; hence it is only natural that he should be guided principally by the tangible indications of his staff gauge, which, owing to its limitations in accuracy and to the interference already described, is slow to show the true trend of the variations in elevation of Rice lake proper, and hence the tendency of the methods of regulation adopted is to produce a fluctuating rather than a steady flow; which, in turn, results in wastages of water with corresponding danger of shortages.

Further, climatic conditions are so variable that strict adherence to a constant elevation of Rice lake is incompatible with a reasonably constant flow at *both* Peterboro and at Hastings. Periods of rainfall during which the lake suddenly rises are succeeded by dry periods accompanied by heavy evaporation losses, during which the lake level naturally falls; consequently, a reasonable latitude in lake elevation is essential. The less latitude allowed the greater are the difficulties in maintaining both constant inflow and outflow without undue wastage.

The maintenance of a uniform flow at Peterboro and the regulation of Rice lake within narrow limits do not, then, insure a uniform flow at Hastings. Moreover, during periods of ample flow the attempt to regulate within such narrow limits has a tendency to draw down the Lake. There is also a tendency to

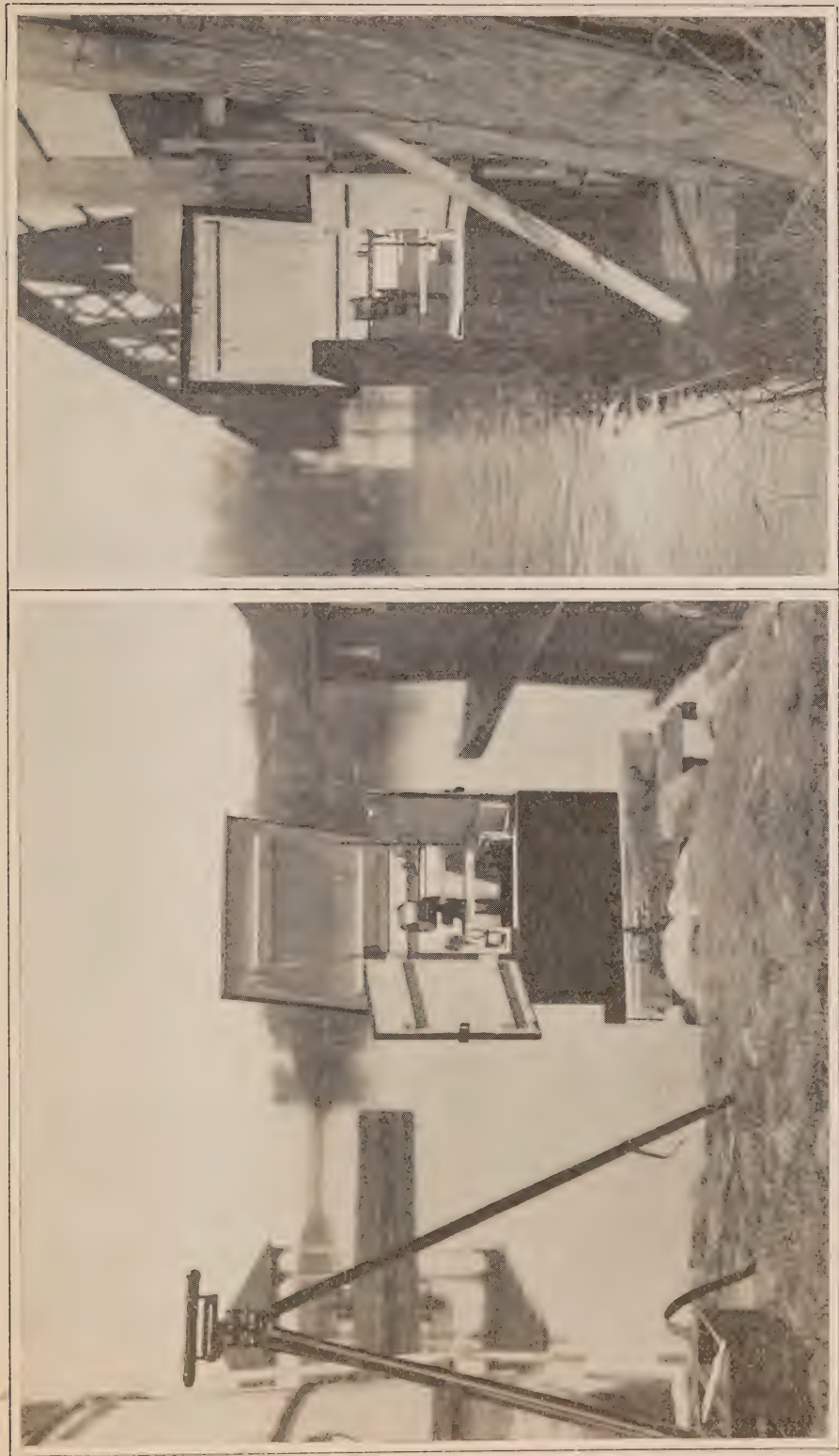


PLATE C—RICE LAKE GAUGES
Gurley graphic recording-type gauges as installed at Gore Landing (left) and Keene (right)

draw down the Lake by prolonging the excess flow beyond the period of surplus supply. Under such conditions, the period of surplus closes with the lake elevation low rather than high, and, unfortunately, with the water, which might have been stored, wasted. When it becomes apparent that the lake is low the flow is reduced, frequently to such an extent that the lake begins to rise. If the period following the surplus should, owing to the prevailing climatic conditions and the inflow at Peterboro, be one of natural depression, when the flow at Hastings would ordinarily have been augmented by drawing on storage from Rice lake, it is clear that a reduction of flow at Hastings sufficient to build up Rice lake will create a shortage.

In previous power shortages, it has invariably been the case that the amount of water necessary to supply the interrupted load could, without ill effects, have been drawn off Rice lake for a period of time sufficient to enable a thorough investigation of conditions to be made before deciding upon the course of action to pursue. In practical regulation, hasty action, with its risk of serious consequences, is unnecessary. If a shortage appears to threaten, every effort should be made to defer it until careful studies have been made and all interested parties have been notified. The control of Rice lake is of such importance as to demand the use of carefully selected measuring equipment, the required accuracy of which depends upon the latitude in elevation permitted. To regulate successfully within the present narrow limits, equipment such as described in the following paragraphs should be used.

The Commission's Methods

No matter what method of control is attempted, in order to obtain satisfactory results reliable data of stage and flow of the waters involved must be available. The Hydro-Electric Power Commission of Ontario has recognized this fact, and at considerable expense and no small effort it has provided the best equipment obtainable in order to assemble all the essential data for a proper consideration of the problem in hand.

A brief description of this equipment is of interest.

Two Gurley graphic water-stage registers (see plates B and C), located on opposite sides of Rice lake at Gores Landing and at Keene, provide continuous graphic records of the elevation of the lake at each point, from which the mean elevation can be determined with ample accuracy by superimposing one graph upon the other, or by tracing both the weekly originals, as they are completed, on cross-section paper specially designed for the purpose. Information on the changes as recorded from day to day during critical periods is obtained from the attendants by telephone.

Plate B shows the Gurley water-stage register with the seven day recording paper, and gives a very good idea of the precision of this rugged yet finely constructed instrument, while plate C shows the same register as it is actually installed on Rice lake at Gore Landing and at Keene.

Plate D is a photograph of 21 weekly charts from Gores Landing with the Keene records traced on them, showing, in a most convincing manner, the effect of windage which simultaneously raises the water at one point and lowers it at the other. The effect of windage is, in fact, so nearly equal and opposite that the appearance of "mirror symmetry" results when the graphs are in proper relation to each other and makes it very simple indeed to determine the mean lake elevation.

For convenience in comparison, this mean line of water level is read and re-plotted on cross-section paper along with other essential factors affecting operation—as shown on plates E and G.

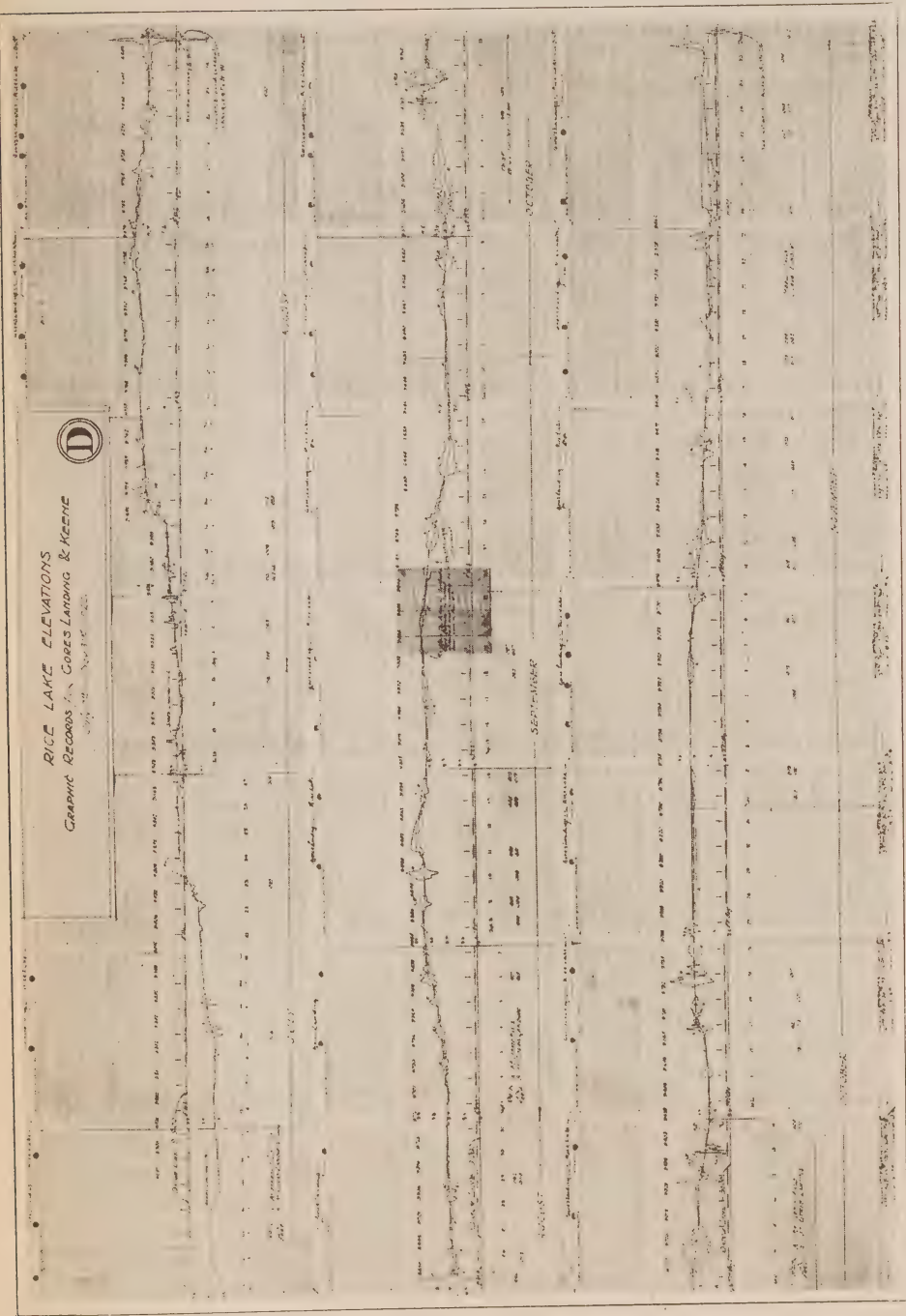


PLATE D

A photograph of twenty-one weekly charts from graphic recording gauge at Gore Landing, with the records from the Keene gauge traced upon them. Note effect of windage which simultaneously raises the lake at one point and lowers it at the other, giving the effect of "mirror-symmetry"

The gauging stations at Gores Landing and at Keene are equipped with rain gauges to assist in analysing changes in lake elevations and in studying conditions of water supply.

The records obtained from this equipment are not as yet used to aid in flow regulation.

Calculation of Hastings Flow

Let us consider next the flow conditions at Hastings. The area of the reach, called the Heely-Hastings reach—which, as the name implies, lies between Heely falls and Hastings—is known, and the flow at Heely falls is measured and computed daily. The elevation of the Heely-Hastings reach is also read at regular intervals each day. This enables the Commission, by computing the amount of flow—either stored or withdrawn from the reach according as its elevation has increased or decreased—to calculate, from the Heely falls measured flow, the flow at Hastings. Owing to the effect on the Heely-Hastings reach of precipitation and evaporation, this method of calculation does not give the exact flow at Hastings, but it does give an even more useful quantity, viz., the net available water supply into the Heely-Hastings reach—allowing for all, sources of supply and loss—expressed in terms of a flow at Hastings. This method of computation yields results which are not only instructive but which would also be of great value in securing improved regulation.

Operating Utility of the Heely-Hastings Reach

The term “Heely-Hastings reach” is used so frequently in this discussion, and the reach itself is of such importance in the efficient utilization of the available flow at Hastings for the development of power, that it appears desirable to devote a little attention to the purpose it serves in operation.

The Heely-Hastings reach is simply a section of the Trent river between Heely falls and Hastings. Its area is $5\frac{1}{2}$ square miles. The Commission is permitted, in order to minimize wastage of water, a latitude of 6 inches in the elevation of this reach, and when no logs are out of the Heely falls dam, the Commission is responsible for maintaining it above the minimum. The maximum level is always regulated by the lockmaster and when logs are out of the Heely falls dam, the minimum level is also regulated by him.

The load on the Central Ontario and Trent system follows a fairly consistent daily and weekly cycle. It is, of course, a well-known fact that the day load is considerably heavier than the night load, also that from Saturday noon to Monday morning the load is greatly reduced. The 6 inches permissible variation provides an equalizing basin which enables the Saturday and Sunday surplus flow to be stored for use during the remainder of the week; and the surplus flow at night to be stored for use the next day, thus effecting, during conservation periods, a very considerable saving. This latitude is also very useful in smoothing out temporary fluctuations in the flow at Hastings. For instance, should the Hastings flow during the early part of the week be low, it can be made up at Heely falls by drawing more heavily than usual upon the Heely-Hastings reach without ill results, provided sufficient additional flow is released at Hastings during the latter part of the week to make up the required weekly total.

It should be noted that Heely falls shares the system load variations with the other plants between Hastings and Percy reach, (see plate A for plants and locations). These plants all operate in parallel and by a proper division of load each utilizes the same flow, while maintaining the prescribed reach elevation. Since there are no undeveloped dams intervening, any increase in load at Heely falls results in additional flow being available almost instantly at the plants

below; in effect, the intake of each plant might be directly connected to the discharge of the one above. Thus the storage provided by the Heely-Hastings reach is effective throughout a large and important group of plants. The remainder of the Commission's plants, having no latitude on their reaches, utilize the flow as it comes to them.

Preparation of Operating Data

In order to facilitate the study of operating problems and to make them clear to the various parties interested in the regulation of the Trent and Otonabee rivers, a number of very instructive graphs have been prepared based upon a careful analysis of the various data involved. These graphs, almost at a glance, give a better idea of the operating difficulties than could be obtained by a most laborious study of tabulated figures. As an example of these graphs, plate E is selected for consideration.

Although at first glance plate E may appear complicated, it is in reality very simple, and since it correlates in proper time phase the principal operating features, it is highly instructive. The actual stream flow at Peterboro, at Hastings and at Heely falls, could not be included on this plate without seriously impairing its usefulness through making it difficult to read. They are, however, unnecessary to an understanding of the operating difficulties which are much more clearly and simply shown by the graphs presented, summarizing, as they do, the system conditions.

The graphs on plate E comprise the following:

Weekly Averages in Kilowatts of:

- 1—System load,
- 2—Power equivalent of the total flow at all dams.

Daily Averages in Kilowatts of:

- 3—Wastage at all dams,
- 4—Total power purchased.

Relative Elevations at Midnight of:

- 5—Rice lake,
- 6—Heely-Hastings reach.

Estimates of Load Reduction in Kilowatts:

- 7—July load reduction,
- 8—December load reduction.

Before taking up in detail the more striking specific instances of the operating difficulties encountered, a discussion of some of the general features will be helpful.

General Remarks on Plate E

The system average load, shown by graph No. 1 on plate E, is a measure of the water requirements at all plants. It should be appreciated, however, that the introduction of a new development producing additional power without an increase of flow radically alters the relationship between flow and load conditions prior and subsequent to the introduction of the new plant. A portion of the capacity of the new plant at Ranney falls became available during the latter part of August, but additional load came on early in September, and these facts preclude a comparison of the required flow based on loads before and after this period, inasmuch as the increase in capacity exceeded the increase in load without any increase in flow.

Uniformity of System Load

With the exception just noted, the uniformity of the system demand for water is most striking. There is, of course, the usual seasonal load increase throughout the late summer and fall, reaching a maximum during the dark winter months, but, curiously, the change in climatic conditions to which this increase in load may be attributed, is accompanied by a change in flow conditions. While no hard and fast assertions can be made with respect to the extent of the change in flow conditions at any given season, nevertheless, owing to the wide variations in precipitation, evaporation, transpiration, ground water flow, etc., it is safe to say, in general, that the diminution in evaporation losses in the late summer and fall and their almost complete disappearance with the winter ice cover, is accompanied by a marked "pick up" in the natural flow. This is especially noticeable in a season of normal or high ground water when the natural flow alone is often sufficient to meet the winter load requirements. Limited space prevents an extended discussion of this somewhat complex subject, but it is interesting to observe that the increase in the winter load over the summer load is more than compensated for by an improvement in the natural flow conditions, and that an increase in the demand upon storage, proportional to the increase in load, is not required.

Erratic Variations of Available Power

Contrast this uniformity of flow requirements with the fluctuations in the actual flow of water available for producing power for the system, as shown by graph No. 2, plate E, which is called *Average Weekly Power Equivalent of Total Flow at all Dams*. What this graph represents will best be understood by a reference to graph No. 3. The surplus flow at each plant is measured daily with such accuracy as conditions permit, and, after deducting the normal dam leakage, is reduced to equivalent kilowatts. Graph No. 3 is a plotting of the daily summation of this quantity for all the dams on the system, including the auxiliaries. Since the daily values are not as informative as the weekly averages—because of the weekly load cycle previously described, and the storage afforded by the Heely-Hastings reach which enables the daily variations to be economically taken care of—this summation of the power equivalent of the daily water wasted at all dams has been averaged for *each week* and added to the *weekly* system average load, the result of which is graph No. 2. The dotted hatched area between graphs 1 and 2 represents, then, the weekly average surplus power throughout the system, of which the area under graph 3 is a daily analysis for comparison with Rice lake and the Heely-Hastings reach.

No flow measurement can be considered so informative as graph No. 2, because the intervention of Rice lake and various reaches, including among numerous smaller ones Heely-Hastings reach and Percy reach, alters the relation of the flow throughout to such an extent that it becomes necessary to average the conditions at each plant and sum up the whole. These features are incorporated in graph No. 2.

When consideration is given to these graphs and, in particular, to the time relationships and the relative magnitude of the various surpluses and shortages, it is at once evident that the latter were quite unnecessary.

A study of conditions at Rice lake and at the Heely-Hastings reach will be found interesting and instructive, both with regard to these and other matters which will be mentioned later.

Under actual conditions of regulation, it is, of course, quite impossible to avoid some periods of surplus. Nevertheless, it is also quite possible to avoid

the small hatched areas at the base line on plate E and, occurring as they did at a time of scarcity when all available power was being purchased (see graph 4), they present an apparent contradiction. As a matter of fact, the explanation is simple. A small portion of the total wastage was due to limitations in the storage capacity of the Heely-Hastings reach which, on Sunday, July 30, was filled to overflowing so that a small amount of purchaseable power had to be allowed to waste since its purchase would have raised the Heely-Hastings reach too much above the maximum elevation established by the Department of Railways and Canals. The larger amount, however, was due to a burn-out of a generator at the Campbellford town plant, dam 12, which prevented this plant from utilizing the full flow and thus caused this wastage.

The July Power Shortage

A most striking example of the need for improvement in the facilities for flow regulation at Hastings is presented in the power shortage of July, 1922. Graph No. 3, plate E, shows but a small part of the tremendous surplus which began with the spring freshet and terminated abruptly with Rice lake at the lowest elevation recorded for the season. At the close of this surplus a number of incidents occurred which, combined, had a great effect upon the flow at Hastings, although the exact effect attributable to each incident is difficult to determine. Apparently some of these incidents were, at the time, unknown either to the lockmaster or to those directing the regulation. The Department's dam was tightened and most of the leakage stopped. The Fowlds Company, upon instructions, stopped considerable leakage through their intake works and later shut down their plant completely for repairs. The resulting flow was totally inadequate for power requirements.

Despite the fact that the rainfall during this period was less than the 53 year average, storage on Rice lake was rapidly built up by this reduction in flow.

Rice lake, which had been drawn down to the minimum elevation recorded for the season, by prolonging a freshet flow beyond the period of surplus supply and thus wasting a large amount of water, was next built up by so greatly reducing the flow at Hastings as to cause a power shortage.

By borrowing water from the Heely-Hastings reach (graph No. 6, plate E), load reductions were for a time deferred, but the restricted flow continued, and the Commission, having drawn the reach below the regulated minimum, was required to build it up again. Although the available flow at Hastings was less than that required to supply the system demand for power, the Heely falls flow was further reduced in order to build up the Heely-Hastings reach and restore its elevation which had been lowered by the borrowing of its water in order to carry load at the commencement of the restricted flow. Thus the power shortage which otherwise would have been spread more lightly over a longer period, was concentrated into the period from July 17 to July 27, inclusive.

Effect on Rice Lake of Supplying the Shortage

The July shortage could have been avoided by drawing water from Rice lake in a variety of ways, none of which, apparently, would have resulted in the slightest injury to other interests. To show this more clearly plate G has been prepared and, after a few general remarks, will be discussed in detail.

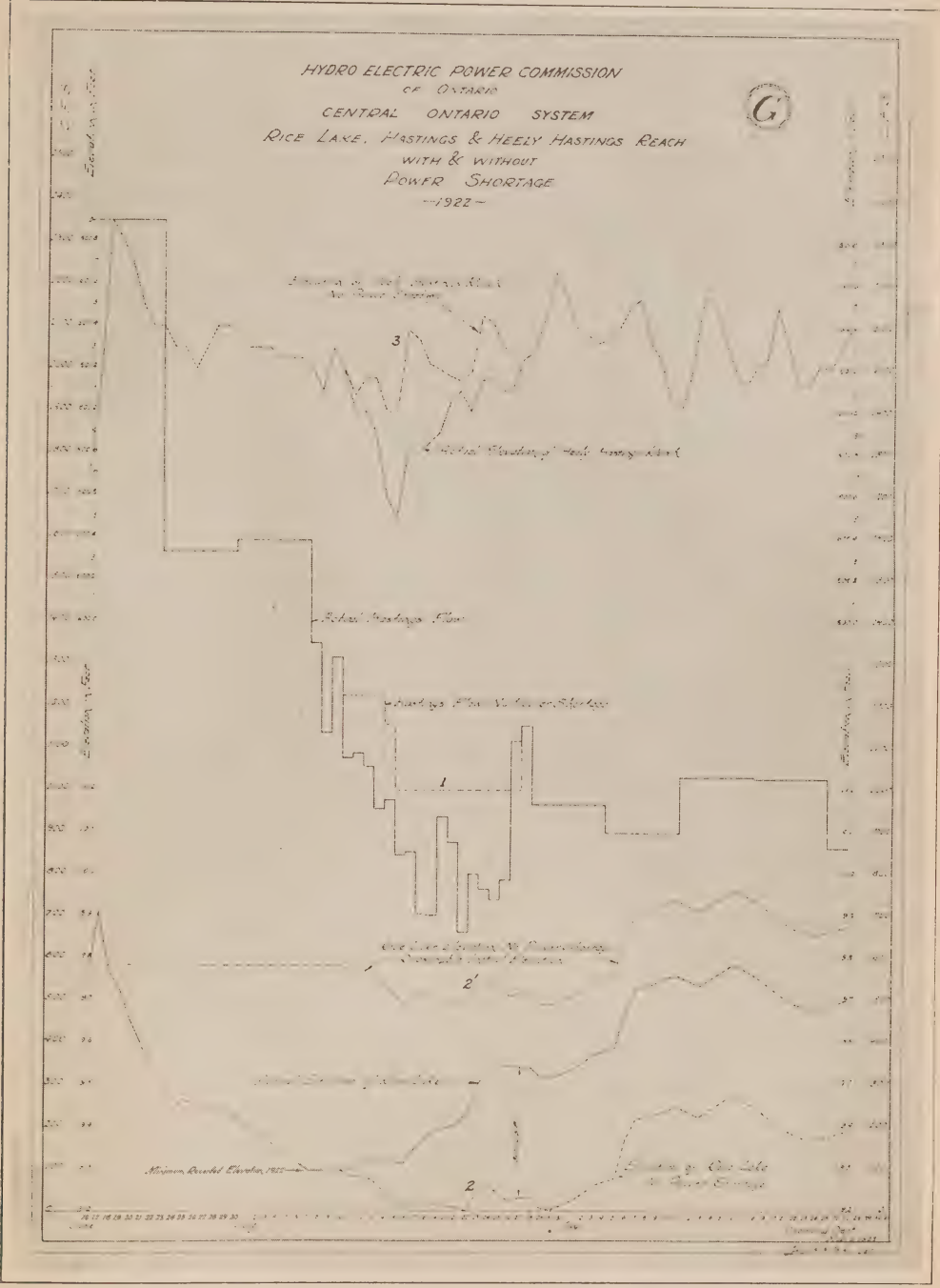


PLATE G

These graphs show the elevations of Rice lake during the power shortage of July, 1922, also the elevations which Rice lake would have followed had sufficient water been drawn off it to supply the entire shortage. The estimated flow required at Hastings and the elevation of the Heely-Hastings reach is also shown

Obviously any study of a regimen of Rice lake which would have supplied sufficient water to eliminate the power shortage, rests upon an estimate of the average unrestricted load of the system. After a careful consideration of various methods, two of which are described below under "Estimated Load Reductions," the simple expedient of averaging four weeks, two immediately preceding and two immediately following the shortage weeks, was adopted. In drawing conclusions as to its accuracy the result, which is shown graphically on plate E, may be compared with the general trend of the average load.

With this estimate of load as a starting point, the average weekly flow required at Heely falls was calculated and apportioned to the days of the week in accordance with the mean flow cycle at Heely falls which prevailed from July 29 to August 25 inclusive—a period during which there was practically no wastage. As a practical check on this estimate of the average weekly flow required to carry the average weekly unrestricted load of the system, it may be stated that, with the same available generating equipment, mean weekly flows less than the estimate have produced average weekly loads greater than the estimated unrestricted load during the shortage weeks.

Returning to plate G, graph No. 1, shows the flows at Hastings required to maintain the Heely-Hastings reach above the minimum, while at the same time providing sufficient water at Heely falls to carry the entire unrestricted load of the system.

Had water sufficient to provide these additional flows been taken each day from Rice lake, the resulting elevations would have been as shown by graph No. 2.

While Rice lake actually built up rapidly during the shortage, graph No. 2 shows that had Rice lake been drawn upon to supply the entire shortage it would, at first, have dropped about one inch. Since the lake, as ordinarily regulated is, and must be, continually rising and falling, this drop of about one inch has no particular significance. Graph No. 2 also shows that by August 6 the original level would have been regained, hence during the interval the actual supply was equal to the unrestricted requirements. The fact that Rice lake continued, on the whole, to gain right up to the period of the heavy surplus during September shows that the supply thereafter exceeded the requirements. This September surplus will be dealt with later.

Had Rice lake, prior to the shortage, been held up to the elevation which, on August 16, it actually attained during a period of power scarcity and low rainfall, power equivalent to double the shortage would have been saved. Graph No. 2' shows the elevations after July 10 which would have resulted under such conditions. Graph No. 3 shows the elevation of the Heely-Hastings reach corresponding to graphs Nos. 1 and 2.

While the general effect of climatic conditions has already been discussed, it should again be noted here that the rainfall during the months of July and August was less than the average for 53 years. Further, that the rainfall during any representative period such as July 1 to July 10; July 10 to July 16, or July 10 to July 28, etc., etc., was also less than the 53-year average.

The Effect of Drawing Down the Heely-Hastings Reach

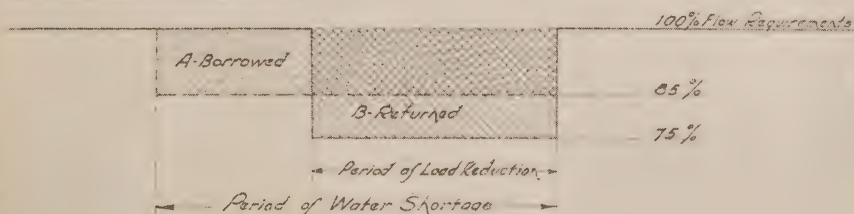
The statement that the Commission's action in drawing down the Heely-Hastings reach caused the July power shortage has frequently been made, but this statement is absolutely without foundation. This reach functions normally as an equalizing basin—that is, as a storage reservoir—and amongst other uses this storage capacity serves to augment deficiencies and store surpluses

FLOW REGULATION at HEELY FALLS



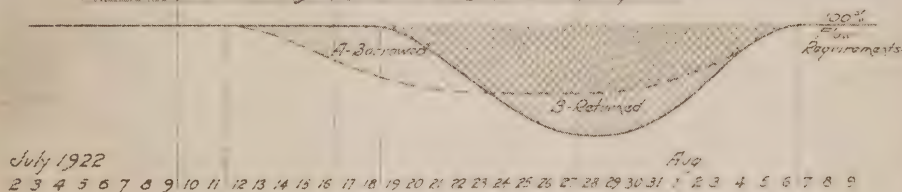
These Graphs represent two methods of flow regulation at Heely Falls. Simplified conditions approximating the facts and assuming no artificial control between Heely Falls and Trenton have been selected.

FLOW at HEELY FALLS



FLOW at TRENTON

Result at Trenton of the above conditions at Heely Falls.



Notes—

The Heavy Solid Flow Line approximate the actual conditions of regulation which drew down the Heely-Hastings Reach and deferred the shortage concentrating it into a shorter period.

The Heavy Dotted Flow Lines approximate the conditions which would have maintained the Heely-Hastings Reach and distributed the shortage over a longer period.

Area A represents a quantity of water which was actually borrowed from the Heely-Hastings Reach in order to maintain the Heely Falls flow in spite of the reduced supply at Hastings.

Area B represents a quantity of water returned to the Heely-Hastings Reach by reducing the Heely Falls flow below the amount available at Hastings.

Since a portion of area B at Trenton was returned after the close of the shortage, Trenton produced a greater number of Kilowatt Hours, during the shortage period, than would have been produced had the Heely-Hastings Reach not been drawn down.

H. E. A. C.
Operating Department

in the Hastings flow. Although the reach was drawn down below the regulated minimum, this was done in full expectation that the stoppage occurring immediately after a tremendous surplus would only be temporary and that the reach would be refilled by increasing the flow at Hastings.

From the closure of the Heely falls dam on July 10 to the end of the power shortage no water was wasted over that dam and, since all the water available for power purposes was converted into electrical energy, it is evident that no other method of operation would have produced at Heely falls more power from the same water. The distribution of the power throughout the shortage period might have been altered, but the total amount generated could not have been increased.

The Commission's plants below Heely falls also utilized the available flow to the utmost. The plant at Campbellford, dam No. 11, is so close to Heely falls that the flow conditions are nearly identical and, since no water was wasted at this plant, the arguments which apply at Heely falls also apply at dam No. 11. Dams Nos. 2 and 5 at Trenton and Frankford are separated from Heely falls by so many canal reaches and such areas of natural storage that for short periods of time no direct relation exists between the flow at these two points.

In studying the graphs presented on plate F, which has been prepared to make this discussion more clear, it must be borne in mind that the reaches and bodies of water between Heely falls and Trenton are controlled by the manipulation of stop logs, and that the manner in which these logs are handled has a much more pronounced effect on the flow at Trenton, at any rate for short periods, than have fluctuations in the flow at Heely falls. The graphs on plate F represent hypothetical conditions and take into account only the natural damping effect of the reaches between Heely falls and Trenton, assuming all other conditions constant, and it is, therefore, possible to compare the results at Trenton of drawing down the Heely-Hastings reach, with those which would have obtained had the reach elevation been maintained above the minimum. It is impossible, on account of stop log manipulation between these points, to attempt to portray the exact conditions since such manipulations so profoundly modify the flow at Trenton resulting from either method of regulation at Heely falls.

The heavy solid flow lines represent approximately the results at Heely falls and at Trenton of the actual method of flow regulation which drew down the Heely-Hastings reach, while the dotted lines show a method of regulation which would have maintained the reach. Since no water was wasted, the solidly hatched area above the solid line is equal to the dotted hatched area above the dotted line, and, subtracting the common cross-hatched portion, the remaining areas A and B are evidently equal. Area A represents the water borrowed from the Heely-Hastings reach to maintain additional flow at Heely falls up to the period of load reduction, while area B represents the same amount of water, stored on the Heely-Hastings reach during the period of load reduction in order to restore its elevation.

At Heely falls the amount borrowed was returned during the shortage period. Therefore, the total energy produced during this period was the same as though the Heely-Hastings reach had not been drawn down, but this is not true at Trenton where the effect of changes in the flow at Heely falls is delayed and smoothed out by the damping effect of the intervening reaches. Any cycle of change at Heely falls results in a delayed and more gradual cycle at Trenton, and is there spread over a longer period; consequently it is not surprising that area B, which represents the effect at Trenton of restoring the elevation

of the Heely-Hastings reach, by returning the water borrowed therefrom, extends beyond the shortage period. Thus during the power shortage period, the method adopted actually produced more kilowatt-hours at Trenton than would have been produced had the Heely-Hastings reach not been drawn down. A reduction in power at Trenton corresponding to the portion of area B which extends beyond the power shortage period was, of course, felt but, since it occurred after additional flow had been provided at Heely falls and when the entire demand of the system for power was being met, it is evident that a greater amount of power was available during the power shortage from the water liberated at Heely falls under the regulation pursued than if the reach had not been drawn down below the specified limits.

Reduced Capacity of Dams 2 and 5

It is appropriate to note here that during the power shortage the ratio of the output of dams Nos. 2 and 5 to that of dam No. 11 and to that of dam No. 14, with due allowance for the Crow river, was considerably below average. While the Commission has no record of the elevation of Percy reach, there is, nevertheless, reason to believe that the shortage was made more acute by storing on Percy reach as well as on Rice lake. This seems to be borne out by the fact that shortly after the shortage period this ratio exceeded the average.

Pre-Shortage Conditions

For those who wish to inquire more deeply into the conditions immediately prior to the shortage, plate I has been prepared showing the power equivalent in kilowatts of the water wasted over the stop logs of all dams—omitting normal dam leakage. For plate I see page 619 overleaf.

Discussion of Plate I

Since logs were out of the Heely falls dam until 9.15 a.m. July 10—exactly one week before load reductions were made,—it was useless, until then, to buy power at Campbellford or at Peterboro in an attempt to store water. The elevations of the Heely-Hastings reach had been most erratic and the flow had been abundant; consequently no alarm was felt when upon the closure of the Heely falls dam the elevation of the reach dropped somewhat; nevertheless, since it was already low on account of previous wastage over the dam, as a precaution power was at once purchased from dam No. 12 at Campbellford. Under such conditions it is not surprising that a certain amount of power—mostly purchasable—was not utilized during the three and a half days which followed. The wastage at Heely falls was due to dam leakage, and at dam No. 18 to log driving, both being circumstances outside of the Commission's control. That the reach would, as usual, build up over the week end, no one questioned. This accounts for the wastage which occurred from July 1 to July 13, inclusive, as shown by area B.

By midnight Thursday, July 13, when the reach was below the prescribed limit, the wastage represented by area C occurred. The amount, however, is comparatively trifling—being only 4 per cent of B.

At midnight Sunday, July 9, the Heely-Hastings reach contained three-fifths of the permissible storage water. Had the Heely falls dam been closed on Saturday, the 8th, instead of on Monday, the reach would have been full, thus storing power equivalent to area C and starting the week advantageously rather than under a handicap.

ESTIMATED LOAD REDUCTIONS July 1922

ACTUAL AVERAGE DAILY LOAD IN KILOWATTS										ESTIMATED WEEKLY LOAD CYCLE			ESTIMATED LOAD REDUCTIONS						
PRE SHORTAGE					POST SHORTAGE								ACTUAL		ESTIMATED		ESTIMATED		
DAY		DATE		K.W.		DATE		K.W.		DATE		K.W.		Ratio		Date		Average	
		A		B		C		D		E		F		G		H		I	
		J		K		L		M		N		O		P		Q		R	
										C-REGD J-4			From Col. K. Col. L. Col. M. Col. N. Col. O. Col. P. Col. Q						
Saturday	July 1	10295	July 8	12055	July 29	11798	Aug 5	11812	45360	11490	19-95	July 15	12076	11490	12076				
Sunday	2	7400	9	7777	30	8057	6	8908	32172	8043	9-75	16	8100	8043	8100				
Monday	3	12220	10	12243	31	12226	7	10730	47419	11855	14-38	17	10631	11855	11855				
Tuesday	4	13270	11	13096	Aug 1	12797	8	12930	52098	13023	15-81	18	9275	13023	13023				
Wednesday	5	13015	12	11032	2	12456	9	12290	48793	12198	14-80	19	8945	12198	12198				
Thursday	6	13015	13	12377	3	13268	10	12840	51460	12865	15-60	20	8760	12865	12865				
Friday	7	13035	14	13177	4	12937	11	12773	51924	12981	15-74	21	10120	12981	12981				
Total		82250		78177		83569		78225	329821	82455	100.01	Weekly T.	67928	82455	83096	14327	18170		
Average		11750		11674		11938		11755	47117	11779		Weekly A.	9704	11779	11871	2075	2167		

TOTAL LOAD REDUCTION

METHOD

Accepted Alternative

KILOWATT DAYS (Grand Total Above) 22399 22784

KILOWATT WEEKS (Grand Total ÷ 7) 3200 3255

AVERAGE FOR THE TWO WEEKS 1800 1627

AVERAGE FOR 11 DAYS July 17th-27th (inc) 2035 2071

Notes:-

Accepted Estimated Weekly Average System Unrestricted Load, July 15th-21st and 22nd-28th-11779 KW. - See Col. O:

Load Reductions were enforced from 7:25 A.M. Monday July 17th to 6:25 P.M. Thursday July 27th, thus affecting two water weeks, July 15th to 21st (inc) and July 22nd to 28th (inc).

Weekly T. 74569 82455 82197 7872 7514
Weekly A. 10654 11779 11744 1122 1088
Grand T. 142511 164910 165295 22399 22784

PLATE H

Estimated Load Reductions—Plate H

Owing to the general nature of the load reductions from July 17 to July 27, inclusive, which were pro-rated over the entire system, and owing also to the difficulty of obtaining reliable information concerning the reduction of load actually made by each consumer, no useful estimate of the total load reduction of the system can be deduced from such data. The reduction has, therefore, been estimated from a comparison of the actual load carried during this period with the loads carried during similar periods before and after.

Method No. 1—Accepted

While the average load of the system is subject to abrupt changes from day to day, the average weekly load, as has been pointed out, is quite consistent and, on account of the storage afforded by the Heely-Hastings reach, the average for a weekly period is the most informative and is used for nearly all calculations. In method No. 1 the actual weekly average load for the weeks ending July 21 and July 28 has been subtracted from the average of four weeks—the two preceding and the two following the shortage weeks—the difference being taken as the shortage. This appears on plate H in the form of total kilowatt-days, kilowatt-weeks and average kilowatts for two weeks, the latter amounting to 1,600 kilowatts.

Method No. 2—Alternative

It may be argued that the estimate of load reduction should be confined to the exact period during which load was reduced. To meet this argument, the four Mondays, Tuesdays, etc., during the two previous and the two following weeks, were averaged. The resulting figures approximate for this season of the year the daily load variation of the typical week, used in Method No. 1, see

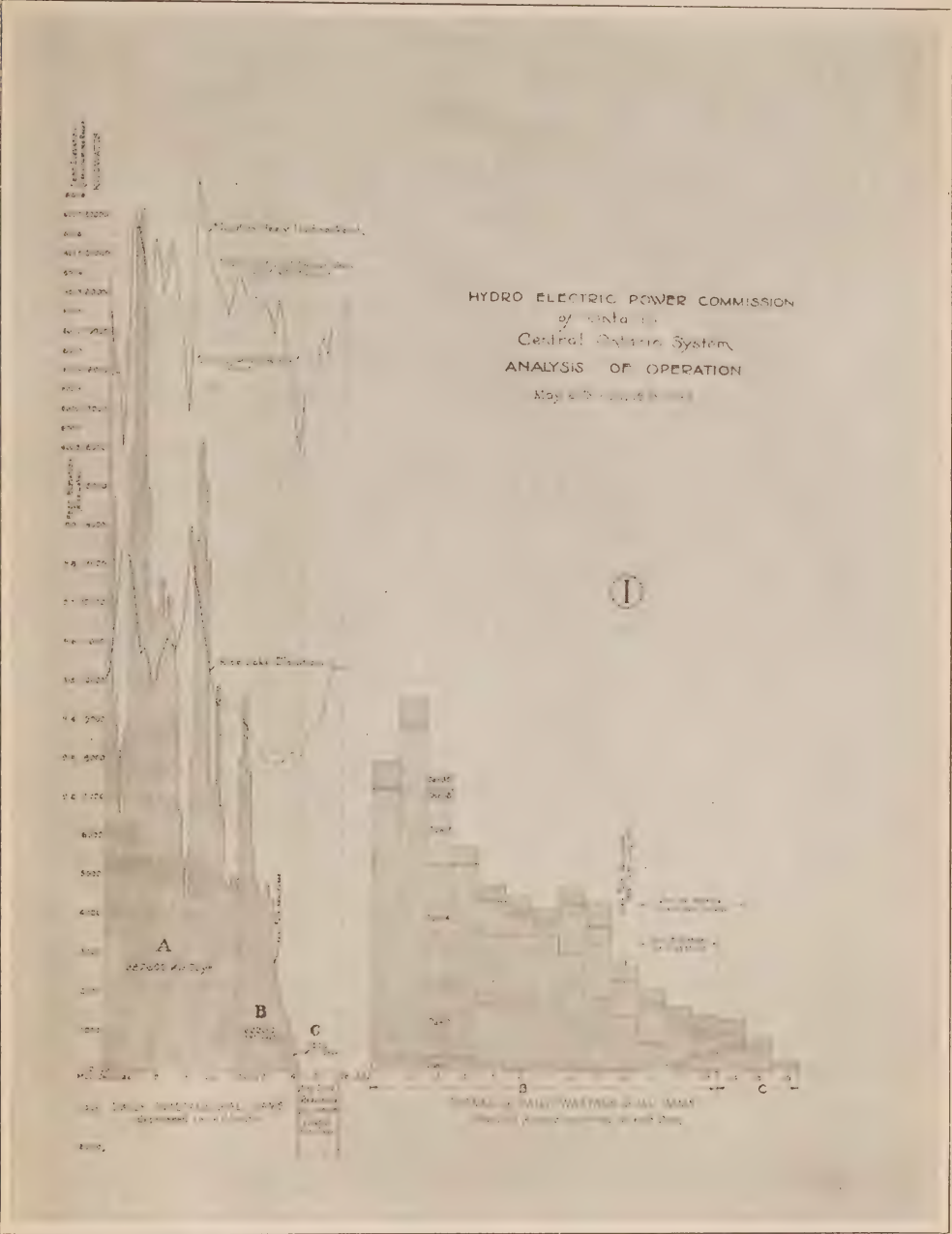


PLATE I

plate H, column K. These day loads were then substituted for the actual loads from July 17 to July 27, inclusive, (column P) and the result taken as the system unrestricted load. The reduction by this method works out to an average of 1,628 kilowatts for two weeks. The difference is due to the fact that the actual average load on July 15, 16 and 28, is 385 kilowatt-days or 55 kilowatt-weeks heavier than the typical Saturday, Sunday and Friday.

While both these methods are reasonable, No. 1 seems preferable since individual days do not strictly follow the average cycle, while weekly periods are much steadier and more uniform. Furthermore, Method No. 1 assumes the same unrestricted load for both weeks—which is a natural assumption and more suited to graphical treatment—while No. 2 does not.

Although Method No. 1 has been used in the load graphs, nevertheless all flow calculations, for the sake of conservatism, are based on a heavier load than either method gives.

Passing next to other incidents: a period of heavy wastage equivalent to about eight times the July power shortage occurred from September 8 to October 5, as will be seen by referring again to plate E. During this period heavy rains occurred in the head waters of the Gull and Burnt rivers. Under the prescribed system of regulation it is problematical how much of this could have been saved. Certainly some of it could because the Kawartha lakes alone would have held more water on October 6.

From October 6 to October 10, a period of power scarcity, during which all available power was purchased, will be seen sandwiched in between two periods of water surplus. During the surplus preceding the period of scarcity, the Heely-Hastings reach had been kept low by control at the Heely falls dam. As a result, when the large surplus closed, as it did, abruptly, the reach was practically down to the regulated minimum and, moreover, the flow at Hastings was insufficient for load requirements without purchasing power. In view of the experience during July, every possible effort was made to raise the reach elevation so as to have a certain amount of water available for the regular weekly cycle plus a small contingency reserve. By purchasing all available power, the reach was in five days built up four-fifths of the permissible amount, whereupon, without any discussion of conditions, logs were again taken out by the tender of the dam at Heely falls, and the entire amount of water accumulated in the Heely-Hastings reach through the purchase of power by the Commission was wasted. The logs were left out until the reach was drawn down to the minimum so that on the 13th and 14th of July it again became necessary to purchase power in order to carry load. Then followed another period of surplus.

During the month of December, load reductions totalling about one-half the July power shortage were made, although the total wastage from October 11 to December 8, during which time precipitation was low (notice that this period does not include the heavy September wastage), would have supplied this shortage twelve times over.

It is clear that fixing responsibility for the difficulties in operation which have arisen during the past year is no part of the object of this discussion. The remaining water powers on the Trent and Otonabee rivers, which may economically be developed to supply the rapidly increasing demand for power on the Central Ontario system, are limited. It is, therefore, absolutely necessary that the surplus waters of these rivers be conserved and employed in such a manner as to produce a maximum amount of power without injury to navigation or other interests. It has been necessary in order to demonstrate the practical outcome of the methods of regulation employed in the past to direct attention to the causes of past power shortages, an analysis of which exposes the weakness of such methods and discloses the significant fact that since the acquisition of the Central Ontario system by the Province all cases of power shortage due to insufficient flow have by subsequent events been proven unnecessary. Despite any considerations which may at the time have appeared to justify a reduction

in flow which caused the shortages, the existing storage facilities would have supplied the shortages many times over.

The object of the foregoing discussion has been to point toward a system of regulation which will obviate the difficulties of the past and assure the efficient utilization of the available water in the future. The more important aspects of the problem of flow regulation at Hastings are set out and the disturbing factors which create differences between the regulation at Peterboro and Hastings have been shown, also in view of the fact that approximately three-quarters of the power developments of these waters occur below Rice lake, the need for adequate regulation at Hastings as well as at Peterboro has been urged. From a power point of view adequate regulation could be secured quite easily and the Commission believes that a study of the data and arguments herein presented will be of assistance in securing the adoption in the near future of methods of regulation satisfactory to all interests concerned.

Although the navigation in the waters of the Trent and Otonabee rivers is under the control of federal authorities while the development of power is under provincial jurisdiction, nevertheless the waters belong to the people, and their development, whether for navigation or for power, should be such as to secure the maximum benefit which may be derived from their utilization. This fact alone imposes upon the federal and provincial authorities alike the moral obligation and necessity for close co-operation and free interchange of data. Due consideration should, at all times, be given to the serious suggestions of interests dependent upon the use of these waters and, in view of the general extent of the interests dependent upon water power, it would appear only reasonable that the Hydro-Electric Power Commission of Ontario, as trustee for the municipalities interested, be notified in advance of any decision by the federal authorities so to reduce the flow of water as to make power reductions necessary, and furthermore that opportunity be afforded for conference respecting what detailed procedure should be followed in the general interest of all concerned.

INDEX

A

Accounts—Explanatory Statement.....	189
Acton—Load in Horsepower.....	19
Municipal Work.....	126
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
*Comparative Balance Sheet.....	300
*Condensed Operating Report.....	396
*Detailed Operating Report.....	408
*Consumers, Consumption, Bills, etc.....	470
*Street Light Installation.....	521
*Cost of Power, Power Rates.....	532
*Lighting Rates.....	542
Acts Passed in 1922.....	1
See also Appendix.....	553
Agincourt—Municipal Work.....	126
Agreements with Municipalities.....	1
Ailsa Craig—Load in Horsepower.....	19
Municipal Work.....	126
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
Mun. Accts., 300, 396, 408, 470, 521, 532, 542	
Alexandria—Order-in-Council.....	1
Load in Horsepower.....	38
Distributing Station.....	80
Municipal Work.....	143
Cost of Power.....	258
Sinking Fund.....	260
Credit or Charge Account.....	262
Combined Balance Sheet.....	394
Mun. Accts., 365, 404, 461, 470, 521, 532, 542	
Alexandria District—Municipal Work.....	145
Alliston—Load in Horsepower.....	30
Distributing Station.....	74
Cost of Power.....	232
Sinking Fund.....	234
Credit or Charge Account.....	236
Combined Balance Sheet.....	388
Mun. Accts., 347, 402, 446, 471, 521, 532, 542	
Alvinston—Order-in-Council.....	2
Low-Tension Lines.....	4
Load in Horsepower.....	22
Municipal Work.....	126
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
Mun. Accts., 300, 396, 408, 471, 521, 532, 542	
Mun. Distribution Systems Constructed.....	647
Ancaster Township Rural Lines.....	228, 229
Mun. Accts., 301, 396, 409, 471, 521, 532, 542	
Apple Hill—Order-in-Council.....	2
Load in Horsepower.....	38
Municipal Work.....	143
Cost of Power.....	258
Sinking Fund.....	260
Credit or Charge Account.....	262
Combined Balance Sheet.....	394
Mun. Accts., 365, 404, 461, 471, 521, 532, 542	

Apple Hill District—Municipal Work.....	145
Approval Laboratory.....	180
Artemesia—Order-in-Council.....	2
Municipal Work.....	141
Arthur—Load in Horsepower.....	33
Cost of Power.....	238
Sinking Fund.....	242
Credit or Charge Account.....	244
Combined Balance Sheet.....	390
Mun. Accts., 353, 402, 451, 471, 521, 532, 542	
Metering Stations Constructed.....	647
Arthur Pequegnat Clock Company of Kitchener—Order-in-Council.....	2
Auburn Development—Capacity, Peak Load, Output.....	15
Auburn Switching Station.....	83
Augusta—Order-in-Council.....	2
Rural Lines.....	3
Aultsville—Municipal Work.....	143
Aux Sable River—Proposed Development on.....	124
Avonmore—Municipal Work.....	143
Aylmer—Load in Horsepower.....	19
Municipal Work.....	126
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
Mun. Accts., 301, 396, 409, 471, 521, 532, 542	
Aylmer District Railways—Report on.....	157
Aylmer Rural Power District—Cost of Power.....	208
Sinking Fund.....	218
Credit or Charge Account.....	226
Combined Balance Sheet.....	384
Ayr—Load in Horsepower.....	19
Municipal Work.....	126
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
Mun. Accts., 301, 396, 409, 471, 521, 532, 542	

B

Baden—Load in Horsepower.....	19
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
Mun. Accts., 301, 396, 409, 472, 521, 532, 542	
Baden Rural Power District—Cost of Power.....	208
Sinking Fund.....	218
Credit or Charge Account.....	226
Combined Balance Sheet.....	384
Balderson—Low-Tension Lines.....	4
Barrie—Load in Horsepower.....	30
Cost of Power.....	232
Sinking Fund.....	234
Credit or Charge Account.....	236
Combined Balance Sheet.....	388
Mun. Accts., 347, 402, 446, 472, 521, 532, 542	
Barton Township—Municipal Work.....	126

*The subjects appertaining to Municipal Accounts cited with individual page reference for Acton, are, in the case of other municipalities, grouped under the general subject of "Municipal Accounts"; the page references being given in corresponding sequence to that employed in the case of Acton.

Comparative Balance Sheet.....	302	Sinking Fund.....	212
Cost of Power, Power Rates.....	532	Credit or Charge Account.....	220
Lighting Rates.....	542	Rural Lines.....	228, 229
Bath—Municipal Work.....	148	Combined Balance Sheet.....	380
Beachville—Load in Horsepower.....	19	Mun. Accts., 303, 396, 410, 474, 521, 532, 542	
Municipal Work.....	126	Bowmanville—Low-Tension Lines.....	4
Cost of Power.....	202	Load in Horsepower.....	47
Sinking Fund.....	212	Municipal Work.....	148
Credit or Charge Account.....	220	Bradford—Load in Horsepower.....	30
Combined Balance Sheet.....	380	Cost of Power.....	232
Mun. Accts., 302, 396, 409, 473, 521, 532, 542		Sinking Fund.....	234
Beamsville—Low-Tension Lines.....	4	Credit or Charge Account.....	236
Distributing Station.....	58	Combined Balance Sheet.....	388
Rural Distribution System.....	644	Mun. Accts., 348, 402, 447, 474, 521, 532, 542	
Beaverton—Load in Horsepower.....	34	Brampton—Load in Horsepower.....	19
Cost of Power.....	248	Municipal Work.....	126
Sinking Fund.....	250	Cost of Power.....	202
Credit or Charge Account.....	250	Sinking Fund.....	212
Rural Lines.....	252	Credit or Charge Account.....	220
Combined Balance Sheet.....	392	Rural Lines.....	228, 229
Mun. Accts., 361, 404, 458, 473, 521, 532, 542		Combined Balance Sheet.....	380
Beeton—Load in Horsepower.....	30	Mun. Accts., 303, 396, 411, 475, 521, 532, 542	
Cost of Power.....	232	Brant—Rural Distribution System.....	644
Sinking Fund.....	234	Brant Rural Power District—Municipal	
Credit or Charge Account.....	236	Work.....	133
Combined Balance Sheet.....	388	Cost of Power.....	208
Mun. Accts., 347, 402, 446, 473, 521, 532, 542		Sinking Fund.....	218
Belle River—Distributing Station.....	70	Credit or Charge Account.....	226
Comparative Balance Sheet.....	362	Combined Balance Sheet.....	384
Combined Balance Sheet.....	384	Description of Lines.....	614
Rural Distribution System.....	644	Brant Township—Municipal Work.....	141
Mun. Distribution Systems Constructed.....	647	Brant Transformer Station.....	67
Belle River Rural Power District—Muni-		Brantford—Order-in-Council.....	2
cipal Work.....	132	Rural Lines.....	3
Belle River Village—Municipal Work.....	127	Load in Horsepower.....	19
Belleville—Load in Horsepower.....	47	Municipal Station.....	67
Switching Station.....	83	Municipal Work.....	126
Belleville Lehigh Cement Company—		Cost of Power.....	202
Distributing Station.....	83	Sinking Fund.....	212
Belleville Service Building.....	83	Credit or Charge Account.....	220
Bertie—Order-in-Council.....	2	Combined Balance Sheet.....	380
Rural Lines.....	3	Mun. Accts., 304, 396, 411, 475, 521, 532, 542	
Beverley—Order-in-Council.....	2	Brantford Sand and Gravel Company,	
Big Chute Development—Capacity, Peak		Ltd.—Order-in-Council.....	3
Load, Output.....	15	Metering Stations Constructed.....	549
Big Chute Generating Station.....	74	Brantford Township—	
Bingham Chute—Generating Station.....	102	Mun. Accts., 304, 396, 411, 475, 521, 532, 542	
Proposed development at.....	124	Brechin—Load in Horsepower.....	34
Binkley's Corners—Low-Tension Lines..	4	Cost of Power.....	248
Blenheim—Rural Lines.....	3	Sinking Fund.....	250
Load in Horsepower.....	19	Credit or Charge Account.....	250
Cost of Power.....	202	Rural Lines.....	252
Sinking Fund.....	212	Combined Balance Sheet.....	392
Credit or Charge Account.....	220	Mun. Accts., 361, 404, 458, 476, 522, 532, 542	
Combined Balance Sheet.....	380	Bridgeport—Cost of Power, Power Rates.....	532
Mun. Accts., 303, 396, 410, 473, 521, 532, 542		Lighting Rates.....	542
Bloomfield—Load in Horsepower.....	47	Brigden—Load in Horsepower.....	19
Municipal Work.....	148	Cost of Power.....	202
Cost of Power.....	276	Sinking Fund.....	212
Credit or Charge Account.....	278	Credit or Charge Account.....	220
Mun. Accts., 371, 406, 466, 473, 521, 532, 542		Combined Balance Sheet.....	380
Bolton—Load in Horsepower.....	19	Mun. Accts., 304, 396, 411, 475, 522, 532, 542	
Municipal Work.....	126	Brighton—Load in Horsepower.....	47
Cost of Power.....	202	Distributing Station.....	84
Sinking Fund.....	212	Municipal Work.....	148
Credit or Charge Account.....	220	Brock Township—Rural Lines.....	252
Rural Lines.....	228, 229	Comparative Balance Sheet.....	361
Combined Balance Sheet.....	380	Brockville—Low-Tension Lines.....	4
Mun. Accts., 303, 396, 410, 474, 521, 532, 542		Load in Horsepower.....	38
Bothwell—Low-Tension Lines.....	4	Distributing Station.....	80
Load in Horsepower.....	19	Cost of Power.....	258
Cost of Power.....	202	Sinking Fund.....	260

Credit or Charge Account.....	262
Combined Balance Sheet.....	394
Mun. Accts., 365, 404, 461, 476, 522, 532, 542	
Rural Distribution System.....	645
Brockville Rural Power District—Cost of Power.....	258
Sinking Fund.....	260
Credit or Charge Account.....	262
Brooklin—Load in Horsepower.....	47
Cost of Power, Power Rates.....	532
Lighting Rates.....	542
Broughdale—Lighting Rates.....	542
Brunner Mond Canada, Limited—Order-in-Council.....	2
Bullock's Corners and Greensville—Cost of Power, Power Rates.....	532
Lighting Rates.....	542
Burford—Load in Horsepower.....	19
Municipal Work.....	126, 127
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
Mun. Accts., 305, 396, 412, 476, 522, 532, 542	
Burgessville—Load in Horsepower.....	19
Municipal Work.....	126
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
Mun. Accts., 305, 396, 412, 477, 522, 532, 542	
Burlington Bay—	
Cross-line.....	4
Right-of-way.....	6

C

Caledonia—Load in Horsepower.....	19
Municipal Work.....	126
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
Mun. Accts., 305, 396, 412, 477, 522, 532, 542	
Cameron Falls Development—Capacity, Peak Load, Output.....	15
Campbellford—Municipal Work.....	148
Dam near.....	649
Campbellford Development—Capacity, Peak Load, Output.....	15
Campbellford Generating Station—(Dam No. 11).....	84
Campbellford, Water & Light Commission—Order-in-Council.....	3
Power Purchased.....	15
Camp Borden—Load in Horsepower.....	30
Canadian Niagara Power Company—Power Purchased.....	15
Canard River Distributing Station.....	70
Cannington—Low-Tension Lines.....	4
Load in Horsepower.....	34
Cost of Power.....	248
Sinking Fund.....	250
Credit or Charge Account.....	250
Rural Lines.....	252
Combined Balance Sheet.....	392
Mun. Accts., 362, 404, 458, 477, 522, 532, 542	
Rural Distribution System.....	645
Caradoc—Rural Lines.....	3
Cardinal—Municipal Work.....	144
Carleton Place—Load in Horsepower.....	39
Municipal Work.....	146
Cost of Power.....	264

Credit or Charge Account.....	266
Combined Balance Sheet.....	394
Mun. Accts., 369, 404, 464, 477, 522, 532, 542	
Carleton Place Development—Capacity, Peak Load, Output.....	15
Carlsruhe—Load in Horsepower.....	33
Casselman—Municipal Work.....	144
Cedar Rapids Power Company—Power Purchased.....	15
Central Ontario and Trent System—	
Transmission Lines.....	11
Increase in Load.....	13
Load in Horsepower.....	43
Diagram of Stations.....	44
Peak Loads.....	46
General.....	83
Hydraulic Engineering and Construction.....	122
Municipal Work.....	148
Rural Municipal Work.....	150
General.....	270
Statement of Assets and Liabilities.....	272
Operating Account.....	274
Surplus Account.....	274
Contingencies Reserve Account.....	276
Renewals Reserve Account.....	277
Rural Lines.....	278
Total Mileage of Lines.....	586
Description of Lines.....	638, 640, 642
July Power Shortage Discussed.....	660 to 668
Central Prison Farm, Guelph—Load in Horsepower.....	19
Charlottenburg—Order-in-Council.....	2
Rural Lines.....	3
Chatsworth—Load in Horsepower.....	33
Cost of Power.....	238
Sinking Fund.....	242
Credit or Charge Account.....	244
Combined Balance Sheet.....	390
Mun. Accts., 353, 402, 451, 478, 522, 532, 542	
Chatham—Order-in-Council.....	2
Rural Lines.....	3
Load in Horsepower.....	19
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Rural Lines.....	228
Combined Balance Sheet.....	380
Mun. Accts., 306, 396, 413, 478, 522, 532, 542	
Rural Distribution System.....	644
Metering Stations Constructed.....	647
Chatham Rural Power District—Municipal Work.....	133
Cost of Power.....	208
Sinking Fund.....	218
Credit or Charge Account.....	226
Combined Balance Sheet.....	384
Chatham, Wallaceburg and Lake Erie Railway—Report on.....	160
Chemical Laboratory.....	188
Chemical Products Company, Ltd.....	84
Chesley—Load in Horsepower.....	33
Distributing Station.....	76
Cost of Power.....	238
Sinking Fund.....	242
Credit or Charge Account.....	244
Combined Balance Sheet.....	390
Mun. Accts., 353, 402, 451, 477, 522, 532, 542	
Chesterville—Load in Horsepower.....	38
Distributing Station.....	80
Municipal Work.....	144
Cost of Power.....	258

Sinking Fund.....	260
Credit or Charge Account.....	262
Combined Balance Sheet.....	394
Mun. Accts., 366, 404, 461, 478, 522, 532, 542	
Rural Distribution System.....	645
Chesterville Rural Power District—Muni-	
cipal Work.....	145
Cost of Power.....	258
Sinking Fund.....	260
Credit or Charge Account.....	262
Chippawa—Load in Horsepower.....	19
Distributing Station.....	58
Municipal Work.....	126, 127
Cost of Power.....	208
Sinking Fund.....	218
Credit or Charge Account.....	226
Combined Balance Sheet.....	380
Mun. Accts., 306, 396, 413, 479, 522, 532, 542	
Rural Distribution System.....	644
Metering Stations Constructed.....	647
Chippawa Development Works—Com-	
bined Balance Sheet.....	384
Chippawa Rural Power District—Muni-	
cipal Work.....	133
Cost of Power.....	208
Sinking Fund.....	218
Credit or Charge Account.....	226
Combined Balance Sheet.....	384
Claims, Acts Respecting the Filing of.....	556
“Clean Up” Deal.....	3
Clinton—Rural Lines.....	3
Low-Tension Lines.....	4
Load in Horsepower.....	19
Municipal Work.....	126
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
Mun. Accts., 306, 396, 413, 479, 522, 532, 542	
Coal Shortage—Effect on People of	
Ontario.....	13
Cobourg—Load in Horsepower.....	47
Distributing Station.....	84
Municipal Work.....	148
Colborne—Load in Horsepower.....	47
Distributing Station.....	84
Coldwater—Load in Horsepower.....	30
Cost of Power.....	232
Sinking Fund.....	234
Credit or Charge Account.....	236
Combined Balance Sheet.....	388
Mun. Accts., 348, 402, 447, 479, 522, 532, 542	
Collingwood—Load in Horsepower.....	30
Municipal Work.....	137
Cost of Power.....	232
Sinking Fund.....	234
Credit or Charge Account.....	236
Combined Balance Sheet.....	388
Mun. Accts., 348, 402, 447, 479, 522, 532, 542	
Collingwood Electric Castings—Distri-	
buting Station.....	74
Comber—Load in Horsepower.....	19
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
Mun. Accts., 307, 396, 413, 480, 522, 532, 542	
Combined Northern Systems—Increase	
in Load.....	13
Load in Horsepower.....	28
Committee on Rules and Regulations.....	177
Concrete Inserts.....	184

Cookstown—Load in Horsepower.....	30
Cost of Power.....	232
Sinking Fund.....	234
Credit or Charge Account.....	236
Combined Balance Sheet.....	388
Mun. Accts., 349, 402, 447, 480, 522, 532, 544	
Cooksville—Load in Horsepower.....	19
Transformer Station.....	68
Cooksville District—Description of Lines.....	616
Copetown—Low-Tension Lines.....	4
Cornwall (Howard Smith Paper Mills,	
Ltd.)—Distributing Station.....	80
Cornwall Transformer Station.....	81
Cornwall Pulp & Paper Company—Load	
in Horsepower.....	38
Cottam Distributing Station.....	70
Creemore—Load in Horsepower.....	30
Cost of Power.....	232
Sinking Fund.....	234
Credit or Charge Account.....	236
Combined Balance Sheet.....	388
Mun. Accts., 349, 402, 448, 480, 522, 534, 544	
Crow River—Storage.....	124
Crowland—Order-in-Council.....	2

D

Dashwood—Load in Horsepower.....	19
Municipal Work.....	126
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
Mun. Accts., 307, 396, 414, 481, 522, 534, 544	
Defective Installations.....	176
Delaware—Load in Horsepower.....	19
Distributing Station.....	64
Municipal Work.....	126
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
Mun. Accts., 307, 396, 414, 481, 522, 534, 544	
Rural Distribution System.....	644
Delaware Rural Power District—Muni-	
cipal Work.....	133
Department of Highways.....	3
Derby Township—Comparative Balance	
Sheet.....	353
Dereham Township—Load in Horsepower.....	19
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Rural Lines.....	228, 229
Combined Balance Sheet.....	380
Municipal Accounts.....	308, 396, 414, 481
Deseronto—Load in Horsepower.....	47
Distribution Systems.....	11
Dixie—Load in Horsepower.....	19
Dominion Sugar Company, Ltd., of	
Chatham—Order-in-Council.....	3
Dominion Sugar Company—Wallaceburg.....	68
Doon and Blair—Lighting Rates.....	544
Dorchester—Load in Horsepower.....	19
Municipal Work.....	126
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
Mun. Accts., 308, 396, 415, 481, 522, 534, 544	
Rural Distribution System.....	644
Metering Stations Constructed.....	647

Essex County System—Load in Horsepower.....	19
Municipal Work.....	136
General.....	282
Operating Account.....	282
Statement of Assets and Liabilities.....	282
Total Mileage of Lines.....	586
Description of Lines.....	622
Essex District—Description of Lines.....	620
Essex District Railways—Report on.....	158
Report on work done during year.....	161
Operating Statistics.....	165, 171
Financial Statements re.....	172
Essex Transformer Station.....	69
Etobicoke—Distributing Station.....	73
Rural Lines.....	228, 229
Etobicoke Township—Load in Horsepower.....	19
Municipal Work.....	127
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
Mun. Accts., 312, 396, 418, 485, 523, 534, 544	
Eugene Phillips Electrical Works, Ltd., Brockville.....	81
Eugene Phillips Plant—Low-Tension Lines.....	4
Eugenia Falls Development—Capacity, Peak Load, Output.....	15
Eugenia System—Transmission Lines.....	8
Load in Horsepower.....	30
General.....	76
Municipal Work.....	139
Operating Account.....	236
Contingencies Reserve Account.....	240
Renewals Reserve Account.....	241
Combined Balance Sheet.....	390
Total Mileage of Lines.....	586
Description of Lines.....	628, 630
Rural Distribution System.....	645
Metering Stations Constructed.....	647
Eugenia System—Rural Municipal Work.....	141
Eugenia System—Rural Lines—Operating Account.....	246
Exeter—Load in Horsepower.....	19
Distributing Station.....	64
Municipal Work.....	127
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
Mun. Accts., 312, 396, 418, 485, 523, 534, 544	
Rural Distribution System.....	644
Exeter Rural Power District—Municipal Work.....	133

F

Fenelon Falls Development—Capacity, Peak Load, Output.....	15
Fenelon Falls Generating Station.....	84
Fenelon Falls Town Plant—Power Purchased.....	15
Fergus—Load in Horsepower.....	19
Municipal Work.....	126
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
Mun. Accts., 312, 396, 418, 485, 523, 534, 544	
Financial Statements.....	189, 271
Finch—Municipal Work.....	144

Fires and Accidents.....	177
Flesherton—Load in Horsepower.....	33
Cost of Power.....	238
Sinking Fund.....	242
Credit or Charge Account.....	244
Rural Lines.....	246
Combined Balance Sheet.....	390
Mun. Accts., 355, 402, 453, 486, 523, 534, 544	
Rural Distribution System.....	645
Metering Stations Constructed.....	647
Flesherton Rural Power District—Cost of Power.....	238
Sinking Fund.....	242
Credit or Charge Account.....	244
Fletcher—Low-Tension Lines.....	4
Distributing Station.....	69
Floor Hardeners.....	185
Flos Township—Rural Lines.....	3
Municipal Work.....	138
Forbes Mills Substation.....	65
Ford—Combined Balance Sheet.....	384
Ford City—Municipal Work.....	127
Mun. Accts., 313, 396, 419, 486, 523, 534, 544	
Forest—Low-Tension Lines.....	4
Load in Horsepower.....	19
Distributing Station—Thedford Feeder.....	69
Municipal Work.....	128
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
Mun. Accts., 313, 396, 419, 486, 523, 534, 544	
Frankford Canning Company.....	84
Frankford Development—Capacity, Peak Load, Output.....	15

G

Galt—Load in Horsepower.....	19
Municipal Station.....	65
Municipal Work.....	128
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
Mun. Accts., 313, 396, 419, 486, 523, 534, 544	
Rural Distribution System.....	644
Galt Rural Power District—Municipal Work.....	134
Cost of Power.....	208
Sinking Fund.....	218
Credit or Charge Account.....	226
Combined Balance Sheet.....	384
Gamebridge—Cost of Power, Power Rates.....	534
Lighting Rates.....	544
General Activities.....	176
Georgetown—Load in Horsepower.....	19
Municipal Work.....	126
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Rural Lines.....	228, 229
Combined Balance Sheet.....	380
Mun. Accts., 313, 396, 419, 487, 523, 534, 544	
Glen Williams—Cost of Power, Power Rates.....	534
Lighting Rates.....	544
Glencoe—Low-Tension Lines.....	4
Load in Horsepower.....	19
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220

Combined Balance Sheet.....	380	Cost of Power.....	204
Mun. Accts., 314, 396, 419, 487, 523, 534, 544		Sinking Fund.....	214
Goderich—Load in Horsepower.....	19	Credit or Charge Account.....	222
Municipal Work.....	128	Combined Balance Sheet.....	380
Cost of Power.....	202	Mun. Accts., 316, 398, 421, 489, 524, 534, 544	
Sinking Fund.....	212	Hamilton, Guelph and Elmira Railway—	
Credit or Charge Account.....	220	Report on.....	159
Rural Lines.....	228, 229	Hanover—Load in Horsepower.....	33
Combined Balance Sheet.....	380	Distributing Station.....	77
Mun. Accts., 314, 396, 420, 487, 523, 534, 544		Cost of Power.....	238
Grand River Valley Railway Substation		Sinking Fund.....	242
at Preston.....	65	Credit or Charge Account.....	244
Grand Valley—Load in Horsepower.....	33	Combined Balance Sheet.....	390
Distributing Station.....	77	Mun. Accts., 355, 402, 453, 489, 524, 534, 544	
Cost of Power.....	238	Hanover Quarries.....	4
Sinking Fund.....	242	Hanover Stone & Cement, Ltd.....	5
Credit or Charge Account.....	244	Harriston—Load in Horsepower.....	21
Combined Balance Sheet.....	390	Municipal Work.....	126
Mun. Accts., 355, 402, 453, 487, 524, 534, 544		Cost of Power.....	204
Grantham Township—Rural Lines.....	3	Sinking Fund.....	214
Load in Horsepower.....	19	Credit or Charge Account.....	222
Cost of Power.....	208	Combined Balance Sheet.....	380
Sinking Fund.....	218	Mun. Accts., 316, 398, 421, 489, 524, 534, 544	
Credit or Charge Account.....	226	Harrow Distributing Station.....	70
Combined Balance Sheet.....	384	Harwich—Rural Lines.....	3
Municipal Accounts.....	314, 398, 420, 544	Hastings—Flow of Trent River at.....	650
Granton—Load in Horsepower.....	19	Regulation of Trent River at.....	650
Municipal Work.....	126	Calculation of Flow at.....	656
Cost of Power.....	202	Havelock—Load in Horsepower.....	47
Sinking Fund.....	212	Municipal Work.....	148
Credit or Charge Account.....	220	Cost of Power.....	276
Combined Balance Sheet.....	380	Credit or Charge Account.....	278
Mun. Accts., 315, 398, 420, 487, 524, 534, 544		Municipal Accounts.....	372, 406, 466, 489, 524
Gravenhurst—Load in Horsepower.....	37	Healey Falls Generating Station.....	84
Cost of Power.....	254	Healey Falls (see Heely Falls).....	650
Sinking Fund.....	256	Heely Falls.....	650
Credit or Charge Account.....	256	Heely Falls Development—Capacity,	
Combined Balance Sheet.....	392	Peak Load, Output.....	15
Mun. Accts., 364, 404, 460, 488, 524, 534, 544		Heely-Hastings Reach—Operating utility	
Gravenhurst-Baysville Railway—Report.....	157	of.....	656
Greenbank—Low-Tension Lines.....	4	Hensall—Load in Horsepower.....	21
Distributing Station.....	78	Municipal Work.....	128
Grenville Crushed Rock Company, Deeks	82	Cost of Power.....	204
Municipal Work.....	146	Sinking Fund.....	214
Grimsby—Low-Tension Lines.....	4	Credit or Charge Account.....	222
Distributing Station.....	58	Combined Balance Sheet.....	380
Guelph—Load in Horsepower.....	19	Mun. Accts., 316, 398, 422, 489, 524, 534, 544	
Cost of Power.....	202	Hespeler—Load in Horsepower.....	21
Sinking Fund.....	212	Municipal Station.....	65
Credit or Charge Account.....	220	Municipal Work.....	128
Combined Balance Sheet.....	380	Cost of Power.....	204
Mun. Accts., 315, 398, 421, 488, 524, 534, 544		Sinking Fund.....	214
Description of Lines.....	608	Credit or Charge Account.....	222
Guelph District Railways—Report on		Combined Balance Sheet.....	380
work done during year.....	167	Mun. Accts., 317, 398, 422, 490, 524, 534, 544	
Operating Statistics.....	171	High Falls Development—Capacity, Peak	
Guelph Radial Railway—Report on.....	161	Load, Output.....	15
Financial Statements re.....	174	High Falls Generating Station.....	82
Guelph Transformer Station.....	64	Highgate—Load in Horsepower.....	21
		Cost of Power.....	204
		Sinking Fund.....	214
		Credit or Charge Account.....	222
		Combined Balance Sheet.....	380
		Mun. Accts., 317, 398, 422, 490, 524, 534, 544	
		Metering Stations Constructed.....	647
		High-Tension Line.....	4
		High-Tension and Electrical Testing	
		Laboratory.....	179
		Holstein—Load in Horsepower.....	33
		Cost of Power.....	238
		Sinking Fund.....	242
		Credit or Charge Account.....	244

H

Hagersville—Load in Horsepower.....	21
Distributing Station.....	62
Municipal Work.....	126
Cost of Power.....	202
Sinking Fund.....	212
Credit or Charge Account.....	220
Combined Balance Sheet.....	380
Mun. Accts., 315, 398, 421, 488, 524, 534, 544	
Hamilton—High-Tension Line.....	4
Load in Horsepower.....	21
Transformer Station.....	73

Combined Balance Sheet.....	390
Mun. Accts., 356, 402, 453, 490, 524, 534, 544	
Hornings Mills—Load in Horsepower....	33
Cost of Power, Power Rates.....	534
Lighting Rates.....	546
Howard—Order-in-Council.....	2
Howard Smith Paper Company—Load in Horsepower.....	38
Humberstone—Load in Horsepower.....	21
Huntsville—Load in Horsepower.....	37
Cost of Power.....	254
Sinking Fund.....	256
Credit or Charge Account.....	256
Combined Balance Sheet.....	392
Mun. Accts., 364, 404, 460, 491, 524, 534, 546	
Hydraulic Engineering and Construction.....	116
Hydro-Electric Power Commission— Assets and Liabilities.....	194

I

Ingersoll—Load in Horsepower.....	21
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	380
Mun. Accts., 317, 398, 423, 491, 524, 534, 546	
Ingersoll Rural Power District—Cost of Power.....	208
Sinking Fund.....	218
Credit or Charge Account.....	226
Combined Balance Sheet.....	384
Inspection in Rural Districts.....	177
International Joint Commission.....	121
Islington—Low-Tension Lines.....	4

J

Jordan—Rural Distribution System.....	644
Metering Stations Constructed.....	647
Jordan Rural Power District—Muni- cipal Work.....	134
Cost of Power.....	208
Sinking Fund.....	218
Credit or Charge Account.....	226
Combined Balance Sheet.....	384

K

Kashabog Lake—Dam on.....	124
Kent District—Description of Lines.....	618
Kent Transformer Station.....	68
Kemptonville—Order-in-Council.....	2
Load in Horsepower.....	39
Distributing Station.....	82
Municipal Work.....	146
Cost of Power.....	264
Credit or Charge Account.....	266
Combined Balance Sheet.....	394
Mun. Accts., 369, 404, 464, 491, 524, 536, 546	
Kincardine—Order-in-Council.....	1
Load in Horsepower.....	33
Distributing Station.....	78
Cost of Power.....	238
Sinking Fund.....	242
Credit or Charge Account.....	244
Combined Balance Sheet.....	390
Mun. Accts., 356, 402, 454, 492, 524, 536, 546	
Kingston—Rural Lines.....	3
Load in Horsepower.....	47
Mun. Accts., 372, 406, 466, 492, 525, 536, 546	
Kinloss—Order-in-Council.....	2
Low-Tension Lines.....	4
Kirkfield—Order-in-Council.....	2

Load in Horsepower.....	34
Combined Balance Sheet.....	392
Cost of Power.....	248
Sinking Fund.....	250
Credit or Charge Account.....	250
Mun. Accts., 362, 404, 459, 491, 525, 536, 546	
Kitchener—Low-Tension Lines.....	4
Load in Horsepower.....	21
Transformer Station.....	65
Municipal Station No. 2.....	66
Municipal Work.....	128
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	380
Mun. Accts., 318, 398, 423, 491, 525, 536, 546	
Kitchener District—Description of Lines.....	610

L

Laboratories.....	179
Lake Erie and Northern Railway—Sub- station at Simcoe.....	68
Lakefield—Order-in-Council.....	1
Load in Horsepower.....	47
Cost of Power.....	276
Credit or Charge Account.....	278
Mun. Accts., 372, 406, 467, 492, 525, 536	
Lambeth—Load in Horsepower.....	21
Municipal Work.....	128
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	380
Mun. Accts., 318, 398, 423, 492, 525, 536, 546	
Lanark—Order-in-Council.....	2
Low-Tension Lines.....	4
Load in Horsepower.....	39
Municipal Work.....	146
Cost of Power.....	264
Credit or Charge Account.....	266
Combined Balance Sheet.....	394
Mun. Accts., 369, 404, 464, 492, 525, 536, 546	
Lancaster—Order-in-Council.....	2
Load in Horsepower.....	38
Municipal Work.....	144
Cost of Power.....	258
Sinking Fund.....	260
Credit or Charge Account.....	262
Combined Balance Sheet.....	394
Mun. Accts., 366, 404, 462, 493, 525, 536, 546	
Legal Proceedings.....	1
Lindsay—Load in Horsepower.....	47
Municipal Work.....	148
Line Materials.....	186
Listowel—Load in Horsepower.....	21
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	380
Mun. Accts., 318, 398, 423, 493, 525, 536, 546	
Load, Rapid Increase of.....	12
London—Rural Lines.....	3
Load in Horsepower.....	21
Transformer Station.....	63
Municipal Station.....	64
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	380
Mun. Accts., 319, 398, 424, 493, 525, 536, 546	

Rural Distribution System.....	644
Description of Lines.....	606
London Railway Commission—Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
London Rural Power District—Municipal Work.....	134
London Township—Municipal Work.....	134
Comparative Balance Sheet.....	319
Louth Township—Rural Lines.....	3, 228, 229
Municipal Accounts.....	319, 398, 424, 493
Low-Tension Lines.....	4
Lucan—Load in Horsepower.....	21
Municipal Work.....	128
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Rural Lines.....	228, 229
Combined Balance Sheet.....	380
Mun. Accts., 320, 398, 424, 493, 525, 536, 546	
Lucknow—Order-in-Council.....	1
Load in Horsepower.....	33
Cost of Power.....	238
Sinking Fund.....	242
Credit or Charge Account.....	244
Combined Balance Sheet.....	390
Mun. Accts., 356, 402, 454, 493, 525, 536, 546	
Lynden—Load in Horsepower.....	21
Distributing Station.....	62
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	380
Mun. Accts., 320, 398, 425, 494, 525, 536, 546	
Rural Distribution System.....	644
Lynden Rural Power District—Municipal Work.....	134
Cost of Power.....	208
Sinking Fund.....	218
Credit or Charge Account.....	226
Combined Balance Sheet.....	384

M

MacFarlane Engineering, Ltd., G. W.—Order-in-Council.....	2
Madoc—Load in Horsepower.....	47
Maidstone—Rural Lines.....	3
Mariposa Township—Municipal Work.....	142
Markdale—Load in Horsepower.....	33
Cost of Power.....	238
Sinking Fund.....	242
Credit or Charge Account.....	244
Rural Lines.....	246
Combined Balance Sheet.....	390
Mun. Accts., 357, 402, 454, 494, 525, 536, 546	
Markham—Rural Lines.....	3
Load in Horsepower.....	21
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	380
Mun. Accts., 320, 398, 425, 494, 525, 536, 546	
Rural Distribution System.....	644
Marmora—Load in Horsepower.....	47
Distributing Station.....	84
Municipal Work.....	148
Cost of Power.....	276
Credit or Charge Account.....	278
Mun. Accts., 373, 406, 467, 494, 525	

Martintown—Order-in-Council.....	2
Load in Horsepower.....	38
Municipal Work.....	144
Cost of Power.....	258
Sinking Fund.....	260
Credit or Charge Account.....	262
Combined Balance Sheet.....	394
Mun. Accts., 366, 404, 462, 494, 525, 536, 546	
Rural Distribution System.....	645
Martintown Rural Power District—Cost of Power.....	258
Sinking Fund.....	260
Credit or Charge Account.....	262
Maxville—Order-in-Council.....	2
Load in Horsepower.....	38
Municipal Work.....	144
Cost of Power.....	258
Sinking Fund.....	260
Credit or Charge Account.....	262
Combined Balance Sheet.....	394
Mun. Accts., 367, 404, 462, 494, 525, 536, 546	
Maxville District—Municipal Work.....	145
Meaford—Municipal Work.....	140
Merlin—Low-Tension Lines.....	4
Municipal Work.....	129
Comparative Balance Sheet.....	321
Combined Balance Sheet.....	384
Municipal Distribution Systems Constructed.....	647
Merritton—Order-in-Council.....	1
Load in Horsepower.....	21
Municipal Work.....	126
Cost of Power.....	208
Sinking Fund.....	208
Credit or Charge Account.....	226
Combined Balance Sheet.....	384
Mun. Accts., 321, 398, 425, 495, 525, 536, 546	
Metallurgical Studies.....	186
Meter and Standards Laboratory.....	181
Metropolitan Railway.....	3
Midland—Load in Horsepower.....	30
Distributing Station.....	76
Municipal Work.....	138
Cost of Power.....	232
Sinking Fund.....	234
Credit or Charge Account.....	236
Combined Balance Sheet.....	388
Mun. Accts., 350, 402, 448, 495, 525, 536, 546	
Militia and Defence, Minister of—Order-in-Council.....	2
Millbrook—Load in Horsepower.....	47
Milton—Load in Horsepower.....	21
Municipal Work.....	129
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Rural Lines.....	228, 229
Combined Balance Sheet.....	380
Mun. Accts., 321, 398, 425, 495, 525, 536, 546	
Milverton—Load in Horsepower.....	21
Distributing Station.....	66
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	380
Mun. Accts., 321, 398, 426, 495, 525, 536, 546	
Mimico—Load in Horsepower.....	21
Distributing Station.....	68
Municipal Work.....	129
Cost of Power.....	204
Sinking Fund.....	214

Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 322, 398, 426, 495, 526, 536, 546	
Mimico Asylum—Load in Horsepower....	21
Minden District Railway—Report on....	157
Miscellaneous.....	124
Mitchell—Load in Horsepower.....	21
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 322, 398, 426, 496, 526, 536, 546	
Montrose Distributing Station.....	60
Montrose Station, Chippawa Develop- ment—Load in Horsepower.....	21
Moorefield—Load in Horsepower.....	21
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 322, 398, 427, 496, 526, 536, 546	
Morrisburg—Low-Tension Lines.....	4
Transformer Station.....	81
Mount Brydges—Load in Horsepower....	21
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 323, 398, 427, 496, 526, 536, 546	
Mount Forest—Load in Horsepower.....	33
Distributing Station.....	78
Cost of Power.....	238
Sinking Fund.....	242
Credit or Charge Account.....	244
Combined Balance Sheet.....	390
Mun. Accts., 357, 402, 455, 497, 526, 536, 546	
Municipal Distribution Systems.....	644
Municipal Electric Railway Act, 1922....	568
Municipal Work.....	126
Muskoka River.....	121
Muskoka System—Transmission Lines... 10	
Increase in Load.....	13
Load in Horsepower.....	35
Peak Loads.....	35
Hydraulic Engineering and Construc- tion.....	121
Municipal Work.....	142
Operating Account.....	252
Contingencies Reserve Account.....	254
Renewals Reserve Account.....	255
Combined Balance Sheet.....	392
Total Mileage of Lines.....	586
Description of Lines.....	632

N

Napanee—Load in Horsepower.....	47
Nassau (C.G.E. Co., Exchange Power)— Power Purchased.....	15
Nepean—Order-in-Council.....	2
Rural Distribution System.....	645
Metering Stations Constructed.....	647
Nepean Rural Power District—Muni- cipal Work.....	147
Neustadt—Load in Horsepower.....	33
Cost of Power.....	238
Sinking Fund.....	242
Credit or Charge Account.....	244
Combined Balance Sheet.....	390
Mun. Accts., 357, 402, 455, 497, 526, 536, 546	

Newburg—Load in Horsepower.....	47
Newbury—Order-in-Council.....	1
Low-Tension Lines.....	4
Load in Horsepower.....	21
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 323, 398, 427, 497, 526, 536, 546	
Newcastle—Load in Horsepower.....	47
Distributing Station.....	86
Municipal Work.....	149
New Hamburg—Load in Horsepower....	21
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 323, 398, 427, 497, 526, 536, 546	
New Ontario District—Municipal Work. 150	
New Toronto—Load in Horsepower.....	21
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 324, 398, 428, 497, 526, 536, 546	
Newington—Municipal Work.....	144
Niagara—Rural Distribution System....	644
Metering Stations Constructed.....	647
Niagara District—Description of Lines. 502	
Niagara Falls—Transmission Lines.....	6
Load in Horsepower.....	21
Municipal Station.....	61
Municipal Work.....	126, 129
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 324, 398, 428, 498, 526, 536, 546	
Act Respecting City of.....	582
Niagara Falls Power Company—Power Purchased.....	15
Niagara Falls Power Development Plant. 384	
Niagara Falls Street Railway—Report on. 160	
Niagara Rural Power District—Muni- cipal Work.....	134
Cost of Power.....	208
Sinking Fund.....	218
Credit or Charge Account.....	226
Combined Balance Sheet.....	384
Niagara, St. Catharines and Toronto Railway—Report on.....	160
Niagara System—Transmission Lines....	6
Increase in Load.....	13
General.....	16
Peak Loads.....	18
Loads of Municipalities.....	19
Monthly Kilowatt-Hours.....	20
Hydraulic Engineering and Construc- tion.....	116
Municipal Work.....	126
Operating Account.....	200
Contingencies Reserve Account.....	210
Renewals Reserve Account.....	211
Rural Lines.....	228
Combined Balance Sheet.....	380
Steel Tower Lines.....	586
Total Mileage of Lines.....	586
Description of Lines.....	598
Distribution Feeders Constructed....	646
Metering Stations Constructed.....	647

Municipal Distribution Systems Constructed.....	647	Omeme—Load in Horsepower.....	47
Niagara System—Rural—Municipal Work.....	132	Mun. Accts., 373, 406, 467, 499, 526, 536, 546	
Niagara Transformer Station.....	60	Ontario Agricultural College, Guelph—Load in Horsepower.....	19
Niagara-on-the-Lake—Load in Horsepower.....	21	Ontario Power Company—Load in Horsepower.....	23
Municipal Work.....	126	Peak Loads.....	24
Cost of Power.....	204	Total Monthly Output of Generating Station.....	25
Sinking Fund.....	214	General.....	58
Credit or Charge Account.....	222	Financial Statement.....	284
Combined Balance Sheet.....	382	Assets and Liabilities.....	286
Mun. Accts., 324, 398, 428, 498, 526, 536, 546		Revenue and Expenditures Account.....	288
Nipigon Development.....	121	Appropriation Account.....	288
Nipigon Fibre and Pulp Mills, Ltd—Order-in-Council.....	2	Total Mileage of Lines.....	586
Nipigon Generating Station.....	82	Transmission Lines.....	596
Nipissing Development—South River... Capacity, Peak Load, Output.....	4	Ontario Power Company Generating Plant—Capacity, Peak Load, Output.....	15
Nipissing Ranger Shanties.....	102	Ontario Power Company of Niagara Falls, Order-in-Council.....	3
Nipissing System—Transmission Lines... Increase in Load.....	11	Ontario Power Company System—Description of Lines.....	624
Steam Plant.....	15	Ontario Rock Company, Limited—Order-in-Council.....	2
Load in Horsepower.....	48	Ontario West Shore Railway—Report on... Operating Department, Meter Section ..	156
Diagram of Stations.....	48	Operation of the Systems.....	12
Peak Loads.....	49	Orangeville—Load in Horsepower... Distributing Station.....	33
General.....	102	Cost of Power.....	78
Hydraulic Engineering and Construction... Municipal Work.....	124	Sinking Fund.....	238
Statement of Assets and Liabilities ..	150	Credit or Charge Account.....	242
Surplus Account.....	272	Combined Balance Sheet.....	244
Operating Account.....	274	Mun. Accts., 358, 402, 455, 499, 526, 536, 546	390
Total Mileage of Lines.....	586	Orford—Order-in-Council.....	2
Description of Lines.....	642	Rural Lines.....	3
North Bay Generating Station.....	102	Orillia—Order-in-Council.....	1
North Dorchester—Order-in-Council....	2	Orillia Water, Light & Power Commission—Power Purchased.....	15
North Dumfries—Rural Lines.....	3	Oro Township—Rural Lines.....	3
North Norwich Township—Comparative Balance Sheet.....	325	Municipal Work.....	138
North Oxford—Order-in-Council.....	2	Orono—Load in Horsepower.....	47
Norwich—Order-in-Council.....	2	Oshawa—Load in Horsepower... Municipal Work.....	47
Load in Horsepower.....	21	Otonabee River—Flow Regulation of... Existing Power Developments on... Hydrological Conditions	149
Municipal Work.....	126	Discussed.....	649
Cost of Power.....	204	Navigation.....	657 to 660
Sinking Fund.....	214	Ottawa—Mun. Accts., 371, 406, 465, 499, 526, 536, 546	669
Credit or Charge Account.....	222	Ottawa & Hull Power and Mfg. Company—Power Purchased.....	15
Rural Lines.....	228, 229	Ottawa System—Transmission Lines... Increase in Load.....	11
Combined Balance Sheet.....	382	Peak Loads.....	13
Mun. Accts., 325, 398, 429, 498, 526, 536, 546		Load in Horsepower.....	42
Norwood—Order-in-Council.....	1	General.....	43
Load in Horsepower.....	47	Municipal Work.....	83
Distributing Station.....	86	Rural Distribution System.....	147
Municipal Work.....	149	Metering Stations Constructed.....	645
Cost of Power.....	276	Otterville—Load in Horsepower... Municipal Work.....	647
Credit or Charge Account.....	278	Cost of Power.....	21
Mun. Accounts	373, 406, 467, 499, 526	Sinking Fund.....	126
Nottawasaga Township—Order-in-Council	2	Credit or Charge Account.....	204
Rural Lines.....	3	Combined Balance Sheet.....	214
Municipal Work.....	138	Mun. Accts., 326, 398, 429, 499, 526, 536, 546	222
Nottawasaga Rural Power District—Cost of Power.....	232	Owen Sound—Load in Horsepower... Distributing Station.....	33
Sinking Fund.....	234	Cost of Power.....	78
Credit or Charge Account.....	236		238

O

Oil Springs—Load in Horsepower.....	21
Distributing Station.....	69
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 326, 398, 429, 499, 526, 536, 546	

Sinking Fund.....	242
Credit or Charge Account.....	244
Combined Balance Sheet.....	390
Mun. Accts., 358, 402, 455, 500, 526, 536, 546	

P

Palmerston—Load in Horsepower.....	21
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 326, 398, 429, 500, 527, 536, 546	
Paris—Load in Horsepower.....	21
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 327, 398, 430, 500, 527, 536, 546	
Parkhill—Load in Horsepower.....	21
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 327, 398, 430, 500, 527, 536, 546	
Paisley—Municipal Work.....	140
Penetang—Load in Horsepower.....	30
Cost of Power.....	232
Sinking Fund.....	234
Credit or Charge Account.....	236
Combined Balance Sheet.....	388
Mun. Accts., 350, 402, 449, 501, 527, 536, 548	
Perth—Load in Horsepower.....	39
Distributing Station.....	82
Municipal Work.....	146
Cost of Power.....	264
Credit or Charge Account.....	266
Combined Balance Sheet.....	394
Mun. Accts., 369, 404, 464, 501, 527, 536, 548	
Peterborough—Load in Horsepower.....	47
Distributing Station.....	86
Municipal Work.....	149
Cost of Power.....	276
Credit or Charge Account.....	278
Mun. Accts., 374, 406, 468, 501, 527, 538, 548	
Regulation of Otonabee River at.....	650
Peterboro Hydraulic Power Company—	
Power Purchased.....	15
Petersburg—Load in Horsepower.....	21
Lighting Rates.....	548
Petrimoux Distributing Station.....	70
Petrolia—Low-Tension Lines.....	4
Load in Horsepower.....	21
Distributing Station.....	69
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 327, 398, 430, 501, 527, 538, 548	
Petrolia Waterworks Distributing Station	69
Photographic Branch.....	188
Photometric Laboratory.....	183
Pickering Township—Credit or Charge	
Account.....	278
Rural Lines.....	278
Picton—Load in Horsepower.....	47
Municipal Work.....	149
Cost of Power.....	276
Credit or Charge Account.....	278
Mun. Accts., 374, 406, 468, 501, 527, 538, 548	

Plattsville—Load in Horsepower.....	21
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 328, 398, 431, 502, 527, 538, 548	
Port Arthur—Mun. Accts., 371, 406, 465,	
502, 527, 538, 548	
Port Colborne—Load in Horsepower....	21
Municipal Work.....	126, 129
Cost of Power.....	208
Sinking Fund.....	218
Credit or Charge Account.....	226
Combined Balance Sheet.....	384
Mun. Accts., 328, 398, 431, 502, 527, 538, 548	
Port Credit—Load in Horsepower.....	21
Distributing Station.....	68
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 329, 398, 431, 503, 527, 538, 548	
Port Credit—St. Catharines Railway—	
Report on.....	158
Port Dalhousie—Load in Horsepower....	21
Municipal Work.....	126, 129
Cost of Power.....	208
Sinking Fund.....	218
Credit or Charge Account.....	226
Combined Balance Sheet.....	384
Mun. Accts., 329, 398, 431, 503, 527, 538, 548	
Port Dover—Order-in-Council.....	2
Load in Horsepower.....	22
Municipal Work.....	126, 129
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 329, 398, 431, 503, 527, 538, 548	
Point Edward—Comparative Balance	
Sheet.....	328
Combined Balance Sheet.....	384
Port Hope—Load in Horsepower.....	47
Switching Station.....	86
Municipal Work.....	149
Port McNicoll—Load in Horsepower....	30
Distributing Station.....	76
Cost of Power.....	232
Sinking Fund.....	234
Credit or Charge Account.....	236
Combined Balance Sheet.....	388
Mun. Accts., 350, 402, 449, 503, 527, 538, 548	
Port Perry—Order-in-Council.....	1
Low-Tension Lines.....	4
Load in Horsepower.....	34
Municipal Work.....	141
Cost of Power.....	248
Sinking Fund.....	250
Credit or Charge Account.....	250
Combined Balance Sheet.....	392
Mun. Accts., 362, 404, 459, 503, 527, 538, 548	
Metering Stations Constructed.....	647
Port Robinson—Load in Horsepower....	21
Cost of Power, Power Rates.....	538
Lighting Rates.....	548
Port Severn Development—Suggested...	74
Port Severn—Proposed Development at...	120
Port Stanley—Load in Horsepower.....	21
Distributing Station.....	67
Municipal Work.....	126

Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 330, 398, 432, 504, 527, 538, 548	
Power Commission Act, 1922.....	553
Power Development Plant, Niagara Falls.....	384
Prescott—Load in Horsepower.....	38
Distributing Station.....	82
Cost of Power.....	258
Sinking Fund.....	260
Credit or Charge Account.....	262
Combined Balance Sheet.....	394
Mun. Accts., 367, 404, 463, 504, 527, 538, 548	
Rural Distribution System.....	645
Prescott District—Municipal Work.....	146
Prescott Rural Power District—Cost of	
Power.....	258
Sinking Fund.....	260
Credit or Charge Account.....	262
Preston—Low-Tension Lines.....	4
Load in Horsepower.....	21
Transformer Station.....	64
Municipal Station.....	65
Municipal Work.....	129
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Rural Lines.....	228, 229
Combined Balance Sheet.....	382
Mun. Accts., 330, 398, 432, 505, 527, 538, 548	
Preston Rural—Load in Horsepower.....	21
Preston Rural Power District—Muni-	
cipal Work.....	135
Cost of Power.....	208
Sinking Fund.....	218
Credit or Charge Account.....	226
Combined Balance Sheet.....	384
Preston Water & Light Commission—	
Order-in-Council.....	3
Priceville—Order-in-Council.....	2
Load in Horsepower.....	33
Cost of Power.....	238
Sinking Fund.....	242
Credit or Charge Account.....	244
Combined Balance Sheet.....	390
Mun. Accts., 358, 402, 456, 505, 527, 538, 548	
Princeton—Load in Horsepower.....	21
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 330, 398, 432, 505, 527, 538, 548	
Problem of Water Shortage.....	48
Provincial Brick Yard—Load in Horse-	
power.....	21
Provincial Treasurer's Statement.....	290

Q

Queenston—Order-in-Council.....	2
Load in Horsepower.....	21
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 331, 400, 433, 505, 527, 538, 548	
Queenston-Chippawa Development—	
High-Tension Line.....	4
Generating Station.....	6
First Unit in Operation.....	12

Peak Loads.....	13
Capacity, Peak Load, Output.....	15
Generating Station.....	51
Hydraulic Construction.....	116

R

Radio Equipment.....	178
Raleigh—Order-in-Council.....	2
Ranney Falls Development—Capacity,	
Peak Load, Output.....	15
General.....	122
Ranney Falls Generating Station.....	86
Reach Township—Municipal Work.....	142
Rice Lake—Regulation of.....	650
Water Supply.....	650
Elevations.....	651
Method of Regulation.....	652
Commission's Method of Determining	
Elevations of.....	654
Rideau Power Company—Power Pur-	
chased.....	15
Rideau System—Transmission Lines.....	10
Increase in Load.....	13
Load in Horsepower.....	38
Peak Loads.....	39
General.....	82
Municipal Work.....	146
Operating Account.....	262
Contingencies Reserve Account.....	264
Renewals Reserve Account.....	265
Combined Balance Sheet.....	394
Total Mileage of Lines.....	586
Description of Lines.....	636
Ridgetown—Load in Horsepower.....	21
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 331, 400, 433, 505, 528, 538, 548	
Rural Distribution System.....	644
Ridgetown Rural Power District—Muni-	
cipal Work.....	135
Cost of Power.....	208
Sinking Fund.....	218
Credit or Charge Account.....	226
Combined Balance Sheet.....	384
Right-of-Way and Lands.....	3
Ripley—Load in Horsepower.....	33
Cost of Power.....	238
Sinking Fund.....	242
Credit or Charge Account.....	244
Rural Lines.....	246
Combined Balance Sheet.....	390
Mun. Accts., 359, 402, 456, 505, 528, 538, 548	
Riverside—Municipal Work.....	130
Combined Balance Sheet.....	384
Mun. Accts., 331, 400, 433, 505, 538, 548	
Rochester—Rural Lines.....	3
Rockwood—Load in Horsepower.....	21
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 331, 400, 433, 506, 528, 538, 548	
Rodney—Load in Horsepower.....	21
Municipal Work.....	130
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 332, 400, 433, 506, 528, 538, 548	
Rural Distribution Act, 1921.....	11

Rural Distribution Act, 1922.....	555
Rural Distribution Systems.....	644
Rural Power Lines.....	3

S

St. Agatha—Load in Horsepower.....	21
St. Catharines—Load in Horsepower....	22
Cost of Power.....	208
Sinking Fund.....	218
Credit or Charge Account.....	226
Combined Balance Sheet.....	384
Mun. Accts., 332, 400, 434, 506, 528, 538, 548	
St. Clair Beach—Municipal Work.....	130
Combined Balance Sheet.....	384
Mun. Accts., 332, 400, 434, 507, 538, 548	
St. George—Load in Horsepower.....	22
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 333, 400, 434, 507, 528, 538, 548	
Metering Stations Constructed.....	647
St. Isadore de Prescott—Municipal Work	145
St. Jacobs—Load in Horsepower.....	22
Distributing Station.....	66
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 333, 400, 434, 507, 528, 538, 548	
Rural Distribution System.....	644
St. Jacobs Rural Power District—Municipal Work.....	135
St. Lawrence River—Proposed Development on.....	121
St. Lawrence and Rideau Systems—Diagram of Stations.....	36
St. Lawrence System—Transmission Lines.....	10
Load in Horsepower.....	37
Peak Loads.....	37
General.....	80
Hydraulic Engineering and Construction.....	121
Municipal Work.....	143
Operating Account.....	258
Contingencies Reserve Account.....	260
Renewals Reserve Account.....	261
Combined Balance Sheet.....	394
Total Mileage of Lines.....	586
Description of Lines.....	634
Rural Distribution System.....	645
St. Lawrence System—Rural—Municipal Work.....	145
St. Mary River—Proposed Development	125
St. Marys—Load in Horsepower.....	22
Transformer Station.....	67
Municipal Work.....	126
Cost of Power.....	204
Sinking Fund.....	214
Credit or Charge Account.....	222
Combined Balance Sheet.....	382
Mun. Accts., 333, 400, 435, 507, 528, 538, 548	
St. Marys Cement Company Distributing Station.....	67
St. Marys District—Description of Lines	612
St. Thomas—Load in Horsepower.....	22
Transformer Station.....	67
Municipal Work.....	130
Cost of Power.....	206
Sinking Fund.....	216
Credit or Charge Account.....	224
Combined Balance Sheet.....	382
Mun. Accts., 334, 400, 435, 508, 528, 538, 548	
Sebringville—Street Light Installation	528
Cost of Power, Power Rates.....	538
Lighting Rates.....	548
Sequin River—Proposed Development on	125
Severn, Eugenia and Wasdells Systems—Peak Loads.....	32
Severn River.....	120
Severn System—Load in Horsepower....	29
General.....	74
Hydraulic Engineering and Construction.....	120
Credit or Charge Account.....	224
Rural Lines.....	228, 229
Combined Balance Sheet.....	382
Mun. Accts., 333, 400, 435, 507, 528, 538, 548	
St. Thomas District—Description of Lines.....	612, 614
Salt Block Substation of the Hydro-Electric Power Commission Railways.....	71
Saltfleet—Rural Lines.....	3
Distributing Station.....	74
Rural Distribution System.....	644
Saltfleet Rural Power District—Municipal Work.....	135
Cost of Power.....	208
Sinking Fund.....	218
Credit or Charge Account.....	226
Combined Balance Sheet.....	384
Sandwich—Cost of Power, Power Rates	538
Lighting Rates.....	548
Rural Distribution System.....	644
Sandwich East—Order-in-Council.....	2
Sandwich Rural Power District—Municipal Work.....	135
Cost of Power.....	208
Sinking Fund.....	218
Credit or Charge Account.....	226
Combined Balance Sheet.....	384
Sandwich West—Rural Lines.....	3
Sandwich, Windsor and Amherstburg Railway, Act Respecting.....	584
Sarnia—Rural Lines.....	3
Load in Horsepower.....	22
Municipal Station.....	71
Operating Statement.....	192
Cost of Power.....	206
Sinking Fund.....	216
Credit or Charge Account.....	224
Combined Balance Sheet.....	382
Mun. Accts., 334, 400, 435, 508, 528, 538, 548	
Saugeen River—Proposed Development on.....	125
Scarborough Rural Lines.....	3
Scarborough Township—Load in Horsepower.....	22
Municipal Work.....	130
Cost of Power.....	206
Sinking Fund.....	216
Credit or Charge Account.....	224
Rural Lines.....	228, 229
Combined Balance Sheet.....	382
Mun. Accts., 334, 400, 435, 508, 528, 538, 548	
Schomberg and Aurora Railway Co.....	556
Seaforth—Low-Tension Lines.....	4
Load in Horsepower.....	22
Municipal Work.....	126
Cost of Power.....	206
Sinking Fund.....	216
Credit or Charge Account.....	224
Combined Balance Sheet.....	382
Mun. Accts., 334, 400, 436, 508, 528, 538, 548	
Sebringville—Street Light Installation	528
Cost of Power, Power Rates.....	538
Lighting Rates.....	548
Sequin River—Proposed Development on	125
Severn, Eugenia and Wasdells Systems—Peak Loads.....	32
Severn River.....	120
Severn System—Load in Horsepower....	29
General.....	74
Hydraulic Engineering and Construction.....	120

Municipal Work.....	137
Operating Account.....	230
Contingencies Reserve Account.....	234
Renewals Reserve Account.....	235
Combined Balance Sheet.....	388
Total Mileage of Lines.....	586
Description of Lines.....	626
Severn System—Rural—Municipal Work.....	138
Seymour Generating Station.....	101
Shelburne—Load in Horsepower.....	33
Cost of Power.....	238
Sinking Fund.....	242
Credit or Charge Account.....	244
Combined Balance Sheet.....	390
Mun. Accts., 359, 402, 456, 509, 528, 538, 548	
Sidney Generating Plant—Capacity, Peak Load, Output.....	15
Sidney Generating Station.....	102
Sidney Terminal Station.....	102
Simcoe—Load in Horsepower.....	22
Municipal Station—Port Dover Feeder	68
Municipal Work.....	126
Cost of Power.....	206
Sinking Fund.....	216
Credit or Charge Account.....	224
Combined Balance Sheet.....	382
Mun. Accts., 335, 400, 436, 509, 528, 538, 548	
Simcoe Rural Power District—Municipal Work.....	135
Smiths Falls—Load in Horsepower.....	39
Municipal Work.....	146
Cost of Power.....	264
Credit or Charge Account.....	266
Combined Balance Sheet.....	394
Mun. Accts., 370, 404, 465, 509, 528, 538, 548	
South Dorchester—Order-in-Council.....	2
Load in Horsepower.....	22
Sinking Fund.....	216
South Falls—Proposed Development on.....	121
South Falls Development—Capacity, Peak Load, Output.....	15
South Lancaster—Municipal Work.....	145
South Norwich Township—Comparative Balance Sheet.....	325
South River.....	4, 124
South Waterloo Township Distributing Station.....	66
Springfield—Load in Horsepower.....	22
Municipal Work.....	126
Cost of Power.....	206
Sinking Fund.....	216
Credit or Charge Account.....	224
Combined Balance Sheet.....	382
Mun. Accts., 335, 400, 436, 509, 528, 538, 548	
Stamford—Order-in-Council.....	2
Rural Lines.....	3
Rural Distribution System.....	644
Stamford Rural Power District—Municipal Work.....	136
Cost of Power.....	208
Sinking Fund.....	218
Credit or Charge Account.....	226
Combined Balance Sheet.....	384
Stamford Township—Load in Horsepower	22
Municipal Station.....	61
Municipal Work.....	126
Cost of Power.....	206
Sinking Fund.....	216
Credit or Charge Account.....	224
Combined Balance Sheet.....	382
Mun. Accts., 335, 400, 437, 509, 528, 538, 548	

Standard Steel Construction Company of Welland—Order-in-Council.....	2
Statement of Assets and Liabilities.....	272
Stayner—Load in Horsepower.....	30
Cost of Power.....	232
Sinking Fund.....	234
Credit or Charge Account.....	236
Combined Balance Sheet.....	388
Mun. Accts., 351, 402, 449, 509, 528, 538, 548	
Steel Tower Transmission Lines.....	586
Stephen—Rural Lines.....	3
Stirling—Load in Horsepower.....	47
Stratford—Load in Horsepower.....	22
Transformer Station.....	66
Municipal Station.....	67
Municipal Work.....	130
Cost of Power.....	206
Sinking Fund.....	216
Credit or Charge Account.....	224
Rural Lines.....	228, 229
Combined Balance Sheet.....	382
Mun. Accts., 336, 400, 437, 510, 528, 538, 548	
Stratford District—Description of Lines.....	610
Strathroy—Load in Horsepower.....	22
Municipal Work.....	126
Cost of Power.....	206
Sinking Fund.....	216
Credit or Charge Account.....	224
Combined Balance Sheet.....	382
Mun. Accts., 336, 400, 437, 510, 529, 538, 548	
Streetsville—Load in Horsepower.....	22
Cost of Power.....	206
Sinking Fund.....	216
Credit or Charge Account.....	224
Streetsville Lumber Company—Metering Stations Constructed.....	647
Sunderland—Load in Horsepower.....	34
Cost of Power.....	248
Sinking Fund.....	250
Credit or Charge Account.....	250
Combined Balance Sheet.....	392
Mun. Accts., 353, 459, 511, 529, 538, 550	
Sunnisdale Township—Rural Lines.....	3
Municipal Work.....	139

T

Table of Transforming Station Details.....	103
Tara—Load in Horsepower.....	33
Cost of Power.....	238
Sinking Fund.....	242
Credit or Charge Account.....	244
Combined Balance Sheet.....	390
Mun. Accts., 359, 402, 457, 511, 529, 538, 550	
Metering Stations Constructed.....	647
Tavistock—Load in Horsepower.....	22
Municipal Work.....	126
Cost of Power.....	206
Sinking Fund.....	216
Credit or Charge Account.....	224
Combined Balance Sheet.....	382
Mun. Accts., 336, 400, 437, 511, 529, 538, 550	
Tavistock Rural Power District—Municipal Work.....	136
Tecumseh—Municipal Work.....	131
Combined Balance Sheet.....	384
Mun. Accts., 337, 400, 437, 511, 529, 540, 550	
Teeswater—Order-in-Council.....	1
Low-Tension Lines.....	4
Load in Horsepower.....	33
Cost of Power.....	238
Sinking Fund.....	242

Credit or Charge Account.....	244	Credit or Charge Account.....	224
Combined Balance Sheet.....	390	Combined Balance Sheet.....	382
Mun. Accts., 360, 402, 457, 511, 529, 540, 550		Mun. Accts., 338, 400, 439, 513, 529, 540, 550	
Telephone Lines.....	590, 594	Tillsonburg—Load in Horsepower.....	22
Thamesford—Load in Horsepower.....	22	Municipal Work.....	126
Cost of Power.....	206	Cost of Power.....	206
Sinking Fund.....	216	Sinking Fund.....	216
Credit or Charge Account.....	224	Credit or Charge Account.....	224
Municipal Work.....	126	Combined Balance Sheet.....	382
Combined Balance Sheet.....	382	Mun. Accts., 339, 400, 439, 513, 529, 540, 550	
Mun. Accts., 337, 400, 438, 511, 529, 540, 550		Toronto—Load in Horsepower.....	22
Thamesville—Load in Horsepower.....	22	Cost of Power.....	206
Cost of Power.....	206	Sinking Fund.....	216
Sinking Fund.....	216	Credit or Charge Account.....	224
Credit or Charge Account.....	224	Rural Lines.....	228, 229
Combined Balance Sheet.....	382	Combined Balance Sheet.....	382
Mun. Accts., 337, 400, 438, 512, 529, 540, 550		Mun. Accts., 339, 400, 439, 513, 529, 540, 550	
Metering Stations Constructed.....	647	Toronto and Niagara Power Company... 3	
Thedford—Order-in-Council.....	2	Purchase of.....	8
Low-Tension Lines.....	4	Comparative Balance Sheet.....	339
Load in Horsepower.....	22	General.....	556
Municipal Work.....	131	Toronto and York Radial Railway.....	3
Cost of Power.....	206	Toronto and York Radial Railway	
Sinking Fund.....	216	Company.....	556
Credit or Charge Account.....	224	Toronto Eastern Railway—Report on... 159	
Combined Balance Sheet.....	382	Toronto Electric Light Company, Ltd... 556	
Mun. Accts., 337, 400, 438, 512, 529, 540, 550		Toronto-London Railway—Report on... 157	
Municipal Distribution Systems Con-		Toronto-Markham Railway—Report on... 156	
structed.....	647	Toronto Power Company—Steam Plant.. 15	
Thessalon River—Proposed Development. 125		Load in Horsepower.....	27
Thorah Township—Municipal Work... 142		Peak Loads.....	27
Thorndale—Load in Horsepower.....	22	General.....	74, 556
Municipal Work.....	126	Toronto Power Company Generating	
Cost of Power.....	206	Plant—Capacity, Peak Load, Out-	
Sinking Fund.....	216	put.....	15
Credit or Charge Account.....	224	Toronto Railway Company.....	556
Combined Balance Sheet.....	382	Toronto Suburban Railway—Report on... 161	
Mun. Accts., 338, 400, 438, 512, 529, 540, 550		Toronto Suburban Railway Company	
Thornton—Load in Horsepower.....	30	Act, 1922.....	561
Cost of Power.....	232	Toronto Township—Rural Lines.....	3
Sinking Fund.....	234	Load in Horsepower.....	22
Credit or Charge Account.....	236	Municipal Work.....	126
Combined Balance Sheet.....	388	Cost of Power.....	206
Mun. Accts., 351, 402, 449, 512, 529, 540, 550		Sinking Fund.....	216
Thorold—Order-in-Council.....	1	Credit or Charge Account.....	224
Municipal Work.....	126, 131	Combined Balance Sheet.....	382
Mun. Accts., 338, 400, 439, 513, 529, 540, 550		Mun. Accts., 339, 400, 440, 513, 540, 550	
Thorold System—Assets and Liabilities... 280		Toronto Transformer Station.....	62
Operating Account.....	280	Tottenham—Load in Horsepower.....	30
Surplus Account.....	280	Cost of Power.....	232
Description of Lines.....	622	Sinking Fund.....	234
Thorold Township—Order-in-Council.... 2		Credit or Charge Account.....	236
Rural Lines.....	3	Combined Balance Sheet.....	388
Thunder Bay System—Transmission		Mun. Accts., 351, 402, 450, 514, 529, 540, 550	
Lines.....	10	Townsend Township—Comparative Bal-	
Increase in Load.....	13	ance Sheet.....	340
Peak Loads.....	40	Transmission Line Records.....	585
Diagram of Stations.....	41	Transmission Lines—Total mileage of... 586	
Load in Horsepower.....	41	Transmission Systems.....	6
Hydraulic Engineering and Construc-		Trent River—Dam No. 8.....	122
tion.....	121	Dam No. 9.....	122
Municipal Work.....	147	Hydraulic Engineering and Construc-	
Operating Account.....	266	tion on.....	124
Sinking Fund.....	268	Flow Regulation of.....	649
Renewals Reserve Account.....	268	Existing Power Developments on.... 649	
Contingencies Reserve Account.....	269	Hydrological Conditions Discussed. 657-660	
Deferred Interest Account.....	269	July Power Shortage Discussed... 660-668	
Total Mileage of Lines.....	586	Navigation.....	669
Description of Lines.....	636	Trenton—Low-Tension Lines.....	4
Tilbury—Load in Horsepower.....	22	Load in Horsepower.....	47
Cost of Power.....	206	Municipal Work.....	149
Sinking Fund.....	216	Tweed—Load in Horsepower.....	47

U

Uxbridge—Order-in-Council	1
Low-Tension Lines	4
Load in Horsepower	34
Municipal Work	142
Cost of Power	248
Sinking Fund	250
Credit or Charge Account	250
Combined Balance Sheet	392
Metering Stations Constructed	647
Mun. Accts. 363, 404, 459, 514, 540, 550	

V

Vaughan—Rural Lines	3
Vaughan Township—Rural Lines	228, 229
Mun. Accts. 340, 400, 440, 514, 529	
Vermilion River—Proposed Development	125
Victoria Harbour—Load in Horsepower	30
Cost of Power	232
Sinking Fund	234
Credit or Charge Account	236
Combined Balance Sheet	388
Mun. Accts., 352, 402, 450, 514, 529, 540, 550	

W

Walkerton—Municipal Work	141
Walkerton Quarries—Rural Distribution System	645
Metering Stations Constructed	647
Walkerton Quarry Rural Power District—Cost of Power	238
Sinking Fund	242
Credit or Charge Account	244
Walkerville—Load in Horsepower	22
Municipal Station	71
Cost of Power	206
Sinking Fund	216
Credit or Charge Account	224
Rural Lines	228, 229
Combined Balance Sheet	382
Mun. Accts., 340, 400, 440, 515, 529, 540, 550	
Wallaceburg—Load in Horsepower	22
Municipal Work	131
Cost of Power	206
Sinking Fund	216
Credit or Charge Account	224
Combined Balance Sheet	382
Mun. Accts., 341, 400, 441, 515, 530, 540, 550	
Rural Distribution System	644
Wallaceburg Rural Power District—Municipal Work	136
Wardsville—Order-in-Council	2
Low-Tension Lines	4
Load in Horsepower	22
Cost of Power	206
Sinking Fund	216
Credit or Charge Account	224
Combined Balance Sheet	382
Mun. Accts., 341, 400, 441, 517, 530, 540, 550	
Warkworth—Municipal Work	149
Wasdells Falls—General	3
Claims	3
Wasdells Falls Development—Capacity, Peak Load, Output	15
Wasdells System—Transmission Lines	8
Load in Horsepower	33
General	78
Municipal Work	141
Operating Account	246
Contingencies Reserve Account	248
Renewals Reserve Account	249
Rural Lines	252

Combined Balance Sheet	392
Total Mileage of Lines	586
Description of Lines	632
Rural Distribution System	645
Distribution Feeders Constructed	646
Metering Stations Constructed	647
Wasdells System—Rural Municipal Work	142
Waterdown—Load in Horsepower	22
Municipal Work	126
Cost of Power	206
Sinking Fund	216
Credit or Charge Account	224
Rural Lines	228, 229
Combined Balance Sheet	382
Mun. Accts., 341, 400, 441, 515, 530, 540, 550	
Rural Distribution System	644
Waterford—Load in Horsepower	22
Municipal Work	126
Cost of Power	206
Sinking Fund	216
Credit or Charge Account	224
Rural Lines	228, 229
Combined Balance Sheet	382
Mun. Accts., 342, 400, 441, 515, 530, 540, 550	
Waterloo—Load in Horsepower	22
Municipal Work	126
Cost of Power	206
Sinking Fund	216
Credit or Charge Account	224
Rural Lines	228, 229
Combined Balance Sheet	382
Mun. Accts., 342, 400, 442, 516, 530, 540, 550	
Waterloo Township—Comparative Balance Sheet	342
Waterworks, Petrolia—Low-Tension Lines	4
Watford—Low-Tension Lines	4
Load in Horsepower	22
Distributing Station	69
Cost of Power	206
Sinking Fund	216
Credit or Charge Account	224
Combined Balance Sheet	382
Mun. Accts., 343, 400, 442, 516, 530, 540, 550	
Waubaushe—Load in Horsepower	30
Cost of Power	232
Sinking Fund	234
Credit or Charge Account	236
Combined Balance Sheet	388
Mun. Accts., 352, 402, 450, 516, 530, 540, 550	
Welland—Load in Horsepower	22
Municipal Work	126
Cost of Power	206
Sinking Fund	216
Credit or Charge Account	224
Combined Balance Sheet	382
Mun. Accts., 343, 400, 442, 517, 530, 540, 550	
Rural Distribution System	644
Welland County—Order-in-Council	2
Welland (Pt. Robinson)—Cost of Power	208
Sinking Fund	218
Credit or Charge Account	226
Welland Rural Power District—Municipal Work	136
Cost of Power	208
Sinking Fund	218
Credit or Charge Account	226
Combined Balance Sheet	384
Wellesley—Load in Horsepower	22
Municipal Work	131
Cost of Power	206
Sinking Fund	216

Credit or Charge Account.....	224
Combined Balance Sheet.....	382
Mun. Accts., 343, 400, 443, 517, 530, 540, 550	
Wellington—Load in Horsepower.....	47
Cost of Power.....	276
Credit or Charge Account.....	278
Mun. Accts., 375, 406, 469, 517, 530, 540, 550	
West Hamilton—Cost of Power, Power Rates.....	540
Lighting Rates.....	550
West Lorne—Load in Horsepower.....	22
Municipal Work.....	126
Cost of Power.....	206
Sinking Fund.....	216
Credit or Charge Account.....	224
Combined Balance Sheet.....	382
Mun. Accts., 344, 400, 443, 517, 530, 540, 550	
West Nissouri—Order-in-Council.....	2
West Oxford—Rural Lines.....	3
West Whitby Township—Comparative Balance Sheet.....	375
Westminster—Order-in-Council.....	2
Weston—Load in Horsepower.....	22
Municipal Station.....	73
Municipal Work.....	126
Cost of Power.....	206
Sinking Fund.....	216
Credit or Charge Account.....	224
Combined Balance Sheet.....	382
Mun. Accts., 344, 400, 443, 518, 530, 540, 550	
Whirlpool Distributing Station.....	60
Whitby—Load in Horsepower.....	47
Cost of Power.....	276
Credit or Charge Account.....	278
Whitby Township—Credit or Charge Account.....	278
Rural Lines.....	278
Williamsburg—Load in Horsepower.....	38
Municipal Work.....	145
Cost of Power.....	258
Sinking Fund.....	260
Credit or Charge Account.....	262
Combined Balance Sheet.....	394
Mun. Accts., 367, 404, 463, 518, 530, 540, 550	
Willoughby—Order-in-Council.....	2
Rural Lines.....	3
Winchester—Order-in-Council.....	2
Load in Horsepower.....	38
Municipal Work.....	145
Cost of Power.....	258
Sinking Fund.....	260
Credit or Charge Account.....	262
Combined Balance Sheet.....	394
Mun. Accts., 368, 404, 463, 519, 530, 540, 550	
Winchester Springs—Municipal Work.....	145
Windsor—Load in Horsepower.....	22
Municipal Station.....	71
Cost of Power.....	206
Sinking Fund.....	216
Credit or Charge Account.....	224
Rural Lines.....	228, 229
Combined Balance Sheet.....	382
Mun. Accts., 344, 400, 443, 519, 530, 540, 550	
Wingham—Order-in-Council.....	1

Load in Horsepower.....	33
Cost of Power.....	238
Sinking Fund.....	242
Credit or Charge Account.....	244
Combined Balance Sheet.....	390
Mun. Accts., 360, 402, 457, 519, 530, 540, 550	
Woodbridge—Load in Horsepower.....	22
Municipal Work.....	126
Cost of Power.....	206
Sinking Fund.....	216
Credit or Charge Account.....	224
Combined Balance Sheet.....	382
Mun. Accts., 345, 400, 444, 519, 530, 540, 550	
Wood-Pole Transmission Lines.....	586
Woodstock—Load in Horsepower.....	22
Transformer Station.....	67
Municipal Work.....	126
Cost of Power.....	206
Sinking Fund.....	216
Credit or Charge Account.....	224
Rural Lines.....	228, 229
Combined Balance Sheet.....	384
Mun. Accts., 345, 400, 444, 519, 530, 540, 550	
Rural Distribution System.....	644
Woodstock District—Description of Lines.....	612
Woodstock Rural Power District—Municipal Work.....	136
Cost of Power.....	208
Sinking Fund.....	218
Credit or Charge Account.....	226
Combined Balance Sheet.....	384
Woodville—Load in Horsepower.....	34
Cost of Power.....	248
Sinking Fund.....	250
Credit or Charge Account.....	250
Rural Lines.....	252
Combined Balance Sheet.....	392
Mun. Accts., 363, 404, 459, 520, 530, 540, 550	
Wroxeter—Order-in-Council.....	1
Wyoming—Load in Horsepower.....	22
Cost of Power.....	206
Sinking Fund.....	216
Credit or Charge Account.....	224
Combined Balance Sheet.....	384
Mun. Accts., 345, 400, 445, 520, 530, 540, 550	

Y

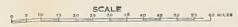
Yarmouth—Order-in-Council.....	2
York County Radial Railway Act, 1922.....	556
York District—Description of Lines.....	620
York Station—Low-Tension Lines.....	4
York Township—Municipal Work.....	131
Comparative Balance Sheet.....	346
Cost of Power, Power Rates.....	540
Lighting Rates.....	550
York Transformer Station.....	72

Z

Zurich—Load in Horsepower.....	22
Municipal Work.....	131
Cost of Power.....	206
Sinking Fund.....	216
Credit or Charge Account.....	224
Combined Balance Sheet.....	384
Mun. Accts., 346, 400, 445, 520, 530, 540, 550	



HYDRO-ELECTRIC POWER COMMISSION
OF ONTARIO
TRANSMISSION LINES AND STATIONS



- LEGEND
- | | | |
|--------------------|---------------------|------------------------------|
| HIGH-TENSION LINES | PROPOSED H.T. LINES | GENERATING STATIONS |
| LOW-TENSION LINES | PROPOSED L.T. LINES | PROPOSED GENERATING STATIONS |
| | | PROPOSED L.T. STATIONS |

